UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Facebook, Inc.,
Petitioner

v.

Bruce Zak,
Patent Owner

U.S. Patent No. 9,141,720 B2
Issue Date: September 22, 2015

Title: SYSTEM AND METHOD FOR MANAGING CONTENT ON A NETWORK INTERFACE

DECLARATION OF DAVID KLAUSNER

Table of Contents

Page

Table of Contents
(continued)

Page

Table of Contents
(continued)

Page

Table of Contents
(continued)

Page

Table of Contents
(continued)

Page

Table of Contents
(continued)

Page

I, David Klausner, declare as follows:

I. INTRODUCTION AND QUALIFICATIONS

A. Qualifications and Experience

1. I am currently employed as an independent computer expert and consultant. I have a bachelor's degree in Mathematics, a master of science degree in Electrical Engineering, and over 49 years of professional experience in the areas of computer networking, security and software. During that time, I have worked as a consultant, as an expert, as an engineer, as a software developer, as a manager, as a company executive, and as a forensic investigator.

2. Specific computer-related technologies that I have worked with include networks, network devices such as routers and switches, internet, web technologies (such as servers, clients, scripts, applets, and applications), protocols, videoconferencing systems, operating systems, computer hardware, source code, and programming languages.

3. In addition, my working experience includes developing software for, among other things, network data communications, business applications, data management, database design, client/server, compilers, parsers, programming languages, user interfaces, quality assurance, real-time applications, artificial intelligence, utility programs, diagnostics, machine simulators, performance analyzers, EDI applications, general ledger, inventory control, software auditing,

manufacturing processes, insurance, financial, and statistical process control. I have designed and developed, as well as managed and assisted in the design and development of, computer hardware and software systems. Some of my clients have been computer software companies, including Symantec, Adobe, Nortel, Intel Corp., Hewlett-Packard, and IBM.

4. My experience includes decades of software development, consulting and expert testimony experience in many aspects of the computer field, from microcomputers to mainframes, and in all areas of programming. I also have experience as an engineer, developer, supervisor, project manager, department manager, middle manager, and company executive, as well as experience in forensic investigation and reverse engineering.

5. Additional details of my background are set forth in my curriculum vitae, attached as **Exhibit A** to this Declaration, which provides a more complete description of my educational background and work experience.

6. I am being compensated for the time I have spent on this matter at the rate of $650 per hour. My compensation does not depend in any way on the outcome of this proceeding.

B. Materials Considered

7. The analysis that I provide in this Declaration is based on my education and experience in the field of computer systems, as well as the documents I have considered, including U.S. Patent No. 9,141,720 ("'720 patent") **[Ex. 1001]**, which states on its face that it issued from an application filed on July 11, 2014, in turn claiming priority back to an earliest application filed on February 13, 2003. For purposes of this Declaration, I have assumed February 13, 2003 as the effective filing date for the '720 patent. I have cited to the following documents in my analysis below:

Exhibit No.	Description of Document
1003	Excerpts from Jim Boyce, *Microsoft Outlook Version 2002 Inside Out* (2001) ("Boyce")
1004	U.S. Patent No. 5,729,734 to Robert D. Parker et al. ("Parker")
1005	Excerpts from Microsoft Computer Dictionary (5th ed. 2002)

II. PERSON OF ORDINARY SKILL IN THE ART

8. I understand that an assessment of claims of the '720 patent should be undertaken from the perspective of a person of ordinary skill in the art as of the earliest claimed priority date, which I have assumed is February 13, 2003.

9. In my opinion, a person of ordinary skill in the art as of February 2003 would have possessed at least a bachelor's degree in electrical engineering or

computer science (or equivalent degree or experience) with at least two years of experience in computer programming and software development, including website development.

10. Although my qualifications and experience exceed those of the hypothetical person having ordinary skill in the art defined above, my analysis and opinions regarding the ’720 patent have been based on the perspective of a person of ordinary skill in the art as of February 2003.

III. THE ’720 PATENT

A. The Specification

11. The ’720 patent purports to disclose and claim a system and method for “automatically creating, updating, scheduling, removing, and otherwise managing content accessible from a network interface,” such as an “Internet site” or “web page on the World Wide Web.” (’720, 3:28-34.) As explained below, the patent generally relates to viewing and managing content on a website (which the patent refers to as a “network site”).

12. Figure 2 below provides “is an architectural diagram illustrating one example of a technical configuration of the system **20**” (6:50-21):

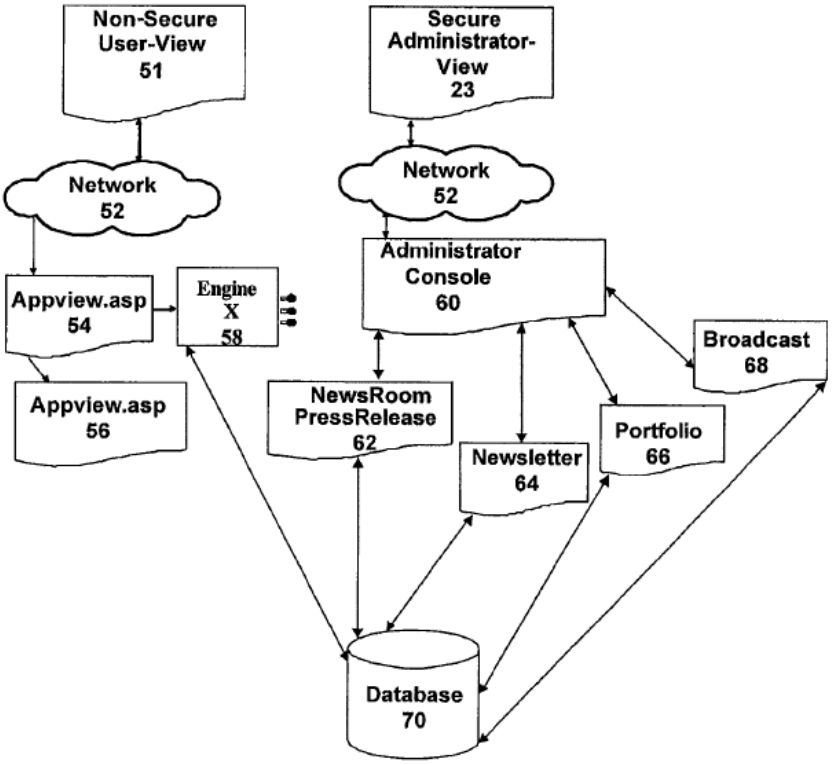


Figure 2

('720, Fig. 2.) The system **20** shown in Figure 2 "can be implemented on a wide variety of different networks," such as "the Internet, the World Wide Web, an intranet, an extranet, a local area network (LAN), a wide area network (WAN), or any other form of network (collectively 'web site')." ('720, 6:6-9.) The two boxes at the top of Figure 2 show a "Non-Secure User View **51**" and "Secure Administrator-View **23**." ('720, 6:52-54.) I will address each view below.

1. User View 51

13. The user view **51** in Figure 2 provides one way for a user to access the network site **34**. The patent explains that "[a] user **50** is potentially any person,

search engine, automated engine, or device interacting with the system **20** for the purpose of using or accessing the content on the network site **34**." ('720, 6:31-34.) "Users **50** access the user-view **51** through one or more access devices" ('720, 6:62-63), and through that view, "various applications **30** on the network **52** can be accessed." ('720, 7:6-7.)

14. The '720 patent repeatedly refers to the term "**application**," which to a person of ordinary skill in the art generally refers to software for performing a particular task. However, the '720 patent uses the term in a broader way:

> An application **30** is a unit of content provided on the network site **34**. Applications **30** can include executable software programs, opportunities to exchange data with an outside user **50**, files, text, graphics, sound, and other forms of applications **30**. Applications **30** may interact with various databases.

('720, 5:20-25.) The term "application" within the patent is therefore a "unit of content" that can include, but does not require, an executable software program.

15. The '720 patent describes various kinds of exemplary "applications." For example, a "biography application" can "be used to provide biographical information about persons and groups of persons involved in the organization sponsoring the web site" and can "display reporting relationships, direct phone numbers, subgroup affiliation, roles, contact information, and other useful

information." ('720, 13:2-4, 13:12-14.) An "event application," that is, a calendar, can "be responsible for displaying and scheduling relevant events **88**." ('720, 11:31-32, 17:17-30.) A "communication application" comprises a "mechanism for transmitting information or interacting with others" via e-mail or other modes of communication. ('720, 12:24-34.)

16. Another concept recited in the claims discussed in this Declaration is a "**configurable** application." The '720 patent describes the "configurable" aspect of applications as follows:

> Applications **30** can be as fully configurable as allowed by the business rules incorporated into the system **20**. Configurable applications **30** are those applications **30** that can be modified or configured by the content provider **22**. Some configurable applications **30** can also be configured to some degree by the users **50** with respect to how the application performs for that user **50**. For example, a user **50** can sign up to receive an e-newsletter in a particular format, such as HTML, PDF, JPEG, etc.

('720, 5:43-51 (underlining added).) The specification explains that a content provider **22**, who can modify or configure a configurable application, "is potentially any person, machine, device or system that is responsible for providing content to a web site." ('720, 3:53-55.)

2. Administrator View 23

17. As its name would imply, administrator view **23**, the other way shown in Figure 2 for accessing the network site **34**, has a somewhat different purpose from the user view **51**. A key purpose of administrator view **23** is to allow management of applications on the network site. "The administrator-view is connected to the network **52** through a secure connection so that the content and/or business rules of the system **20** can be managed. An administrator console **60** or administrator portal is used to manage the applications **30** and/or business rules of the system **20**." ('720, 7:18-24; *see also id.*, 5:8-10 ("The computer **28** can create, update, delete, or schedule (collectively 'manage') an application **30** on the network site **34**.").)

3. Business Rules

18. Another concept recited in the claims of the '720 patent, and mentioned in the quoted passage above, is "business rules." The '720 patent states that "[a] business rule **80** is any rule incorporated into the system **20** that controls how the system **20** functions." ('720, 8:29-30.) "In preferred embodiments, the functionality of the various applications **30** can be customized and automated in accordance with the business rules **80**. Business rules **80** determine what can be viewed, and by whom." ('720, 13:34-37.) For example, "if an event **88** is only

relevant to users **50** of a particular subgroup, the business rules **80** may hide the event **88** from other users **50**." ('720, 11:38-40.)

4. Links

19. The system described in the '720 patent also includes "links," a concept similar to the well-known Uniform Resource Locator (URL) or hyperlink used to navigate and access web pages on the Internet. The '720 patent states that "[a] link **32** is the mechanism by which the user **50** of a network site **34** activates the application **30**." ('720, 5:53-54.) "Links **32** can encapsulate an URL (uniform resource locator), a TCP/IP address, of any other form of identifying the location of applications **30** on the network site **34**." ('720, 5:54-57.) Like applications, the '720 patent states that links can also be "configurable." "A configurable link **32** is a link **32** that can be modified or configured by the content provider **22** as permitted by any relevant business rules." ('720, 5:62-65.)

B. The Claims of the '720 Patent

20. This Declaration addresses claims 1-31 of the '720 patent. Each of the five independent claims—1, 2, 7, 11, and 31—is reproduced below. As shown below, the independent claims share substantial overlap in their limitations.

21. Independent claim 1 reads:

1. **[p]** A system, including a computer, for managing content displayed on a web site, comprising:

[a] a plurality of configurable applications administered by the computer, wherein each configurable application includes a category of content stored by the computer and displayable to users of the web site, and wherein one of the applications is a biography application comprising biographical information about users of the web site;

[b] wherein at least one of the plurality of configurable applications is generated by the computer at least in part based on inputs received from users of the web site, the inputs including at least one of text, graphics, sounds, documents, and multi-media content;

[c] at least one application link displayed on the web site that points to at least one of the plurality of configurable applications;

[d] wherein the at least one application link is generated by the computer based at least in part on a user-configured business rule that applies profile information to designate to which configurable application the generated application link points; and

[e] wherein at least some displayable content is generated by the computer based at least in part on a further user-configured business rule that manages displayable content for the configurable application to which the generated application link points, by selecting from among the content stored by the

> computer before the displayable content generated by the computer is sent in response to a user activating the generated application link.

('720, 22:23-51 (claim 1).) I have added the bracketed notations above (e.g. "**[a]**," "**[b]**," etc.) to facilitate easier identification of the limitations in my analysis below.

22. Independent claim 2 reads:

> 2. **[p]** A system, including a computer and a web site, for managing content displayable on the web site to multiple users of the system who have profiles stored on the system, comprising:
>
> **[a]** at least a first configurable application and a second configurable application, wherein each of the first and second configurable applications includes content that is stored on the computer and that is displayable to the users of the web site, and wherein one of the applications is a biography application that is managed by the computer and that displays biographical information that is received from and that is about one of the users of the system;
>
> **[b]** wherein at least one of the configurable applications is generated by the computer at least in part based on inputs received from multiple users of the system, the inputs including at least one of text, graphics, sounds, documents, and multi-media content;

> **[c]** an administrator portal through which users of the system are permitted to act in the role of an administrator of certain web pages, wherein a user acting in the role of an administrator may manage business rules that utilize profiles of the users of the system to control interaction of the users with the certain web pages, wherein each user of the system is permitted to act in the role of an administrator at least with respect to a subset of web pages on the web site; and
>
> **[d]** at least one configurable link on the web site that points to at least one of the plurality of configurable applications, wherein the at least one configurable link is generated by the computer based at least in part on a profile attributed to at least one user of the system and at least one rule that is configurable by a user acting in the role of an administrator and which applies user profiles to select what content stored on the computer can be viewed by which of the users of the system.

('720, 22:52-23:20 (claim 2).)

23. Independent claim 7 reads:

7. **[p]** A method for managing content that is stored on a system and that is displayable on a web site to users of the system who have profiles saved in the system, the method being implemented on at least one computer having non-transitory computer-readable storage medium with an executable program stored thereon, the method comprising the steps of:

[a] executing the program stored on the computer-readable storage medium, wherein the program instructs the at least one computer to:

[a][1] generate at least a first configurable application and a second configurable application, each configurable application having displayable content, wherein the generation of at least one of the configurable applications is based at least in part on inputs received from multiple users of the system, the inputs including at least one of text, graphics, sounds, documents, and multi-media content and wherein one of the applications is a biography application having biographical information that is received from and that is about one of the users of the system;

[a][2] generate an administrator portal through which users of the system are permitted to act in the role of an administrator of certain web pages, wherein a user acting in the role of an administrator may manage business rules that utilize profiles of the users of the system to control interaction of the users with the certain web pages, wherein each user of the system is permitted to act in the role of an administrator at least with respect to a subset of web pages on the web site; and

[a][3] generate at least one configurable link that points to at least one of the configurable applications, wherein the configurable link is based on information concerning a profile of at least one user of the system and a rule that is configurable

by a user acting in the role of an administrator and that relates to which of the users of the system are permitted to view content of the configurable application to which the configurable link points;

[a][4] embed the configurable link on the web site; and

[a][5] selectively display content of one of the configurable applications in response to a selection of the configurable link that points to the configurable application by one of the users who is permitted to view the configurable application.

('720, 23:44-24:19 (Claim 7).)

24. Independent claim 11 reads:

11. **[p]** A system, including a computer, for managing content displayable on a collection of web pages to multiple users of the system who have profiles stored on the system, the users including an administrator of the collection of web pages, comprising:

a plurality of configurable applications that are managed by the computer, including at least a first configurable application and a second configurable application, wherein the first and second configurable applications each includes content displayable on the collection of web pages, wherein the content includes at least one of text, graphics, sounds, documents, and multi-media content;

> wherein the first configurable application is a biography application that displays biographical information about the administrator of the collection of web pages;
>
> wherein the second configurable application is generated by the computer at least in part based on content received from the administrator and at least in part based on content received from one or more of the other users of the system;
>
> at least one application link on at least one of the web pages that points to at least one of the plurality of configurable applications so as to enable the users to selectively activate the configurable application to which the application link points;
>
> a first business rule that is configurable by the administrator, wherein the system uses the first business rule and information in user profiles to determine which content of the second configurable application is viewable by which of the other users of the system; and
>
> a second business rule that is configurable by the administrator, wherein the system uses the second business rule and information in user profiles to determine which of the other users of the system are permitted to provide content to the second configurable application.

('720, 24:42-25:11 (claim 11).)

25. Independent claim 31 reads:

31. **[p]** A system, including a computer, for managing content displayed on a web site, comprising:

[a] a plurality of configurable applications administered by the computer, wherein each configurable application includes a category of content stored by the computer and displayable to users of the web site, and wherein one of the applications is a biography application comprising biographical information about users of the web site;

[b] wherein at least one of the plurality of configurable applications is generated by the computer at least in part based on inputs received from users of the web site, the inputs including at least one of text, graphics, sounds, documents, and multi-media content;

[c] at least one application link displayed on the web site that points to at least one of the plurality of configurable applications;

[d] wherein the at least one application link is generated by the computer based at least in part on a user-configured business rule that applies profile information to designate to which configurable application the generated application link points; and

[e] wherein at least some displayable content is generated by the computer based at least in part on a further user-configured

> business rule that manages displayable content for the configurable application to which the generated application link points, by selecting from among the content stored by the computer before the displayable content generated by the computer is sent in response to a user activating the generated application link, and
>
> **[f]** wherein said at least some displayable content is stored by the computer in association with a user-configured start date, and wherein the computer applies a further business rule, at the time the user activates the generated application link, that causes the display of content to be suppressed based on said associated user-configured start date.

('720, 26:32-67 (claim 31).)

26. I will address the other claims in the '720 patent in my detailed analysis in **Part IV** below.

C. Claim Construction

27. I have been informed by counsel that invalidity involves a two-step analysis. In the first step, the scope and meaning of a claim is determined by construing the terms of that claim. In the second step, the claim as interpreted is compared to the prior art. Before I address the application of the prior art to the claims of the '720 patent in **Part IV** below, I provide proposed constructions for certain claim terms.

28. I am informed an *inter partes* review proceeding uses a standard for claim construction that is different from litigation. I am informed that in determining the meaning of a claim term in an *inter partes* review, the Board will adopt the "broadest reasonable construction" of that term in light of the patent specification. I have applied this standard in my analysis below.

1. "profile information," "profile," and "user profile"

29. Each independent claim recites "profile information," "profiles of users" or "user profiles."

30. The terms "profile" and "user profile" are not defined in the specification. The specification describes "profiles" as being used by the system in various ways, but a definition of "profile" is not expressly provided. For example, referring to Figure 6, the '720 patent states:

> At **100**, a profile can be defined. The profile can relate to a user, a subgroup, a group, an organization, or even an ASP. Profiles can determine what menu options are visible, enabled, disabled, etc. Profiles also impact the application of business rules **80** by the system **20**. The system **20** can support a complex hierarchy of profiles.

('720, 10:27-33.) The patent refers generally to "user profiles" in the context of describing attributes relating to a user of the system:

> A user characteristic **72** is potentially any characteristic relating to the user **50**. It can include user profiles; login requirements; past use of

> the system **20**; affiliation with various organizations, groups, or subgroups; an e-mail address or other contact information; or any other attribute relating to the user **50**.

('720, 7:65-8:3 (underlining added).)

31. The reference to a "user profile" in this context is generally consistent with the plain and ordinary meaning of that term. For example, the Microsoft Computer Dictionary (5th ed. 2002) **[Ex. 1005]** defines "user profile" as:

> A computer-based record maintained about an authorized user of a multiuser computer system. A user profile is needed for security and other reasons; it can contain such information as the person's access restrictions, mailbox location, type of terminal, and so on. *See also* user account.

(Ex. 1005, at p.544.)

32. Accordingly, in my opinion, the broadest reasonable construction of the terms "**profile information**," "**profile**," and "**user profile**" is "**information comprising attributes relating to a user of the system**."

2. "application" and "configurable application"

33. Each independent claim recites a "configurable application." The '720 patent defines the term "application" broadly:

> An application **30** is a unit of content provided on the network site **34**. Applications **30** can include executable software programs,

> opportunities to exchange data with an outside user **50**, files, text, graphics, sound, and other forms of applications **30**.

('720, 5:20-24 (underlining added).) A person of ordinary skill in the art would have interpreted the first sentence above as instructive in ascertaining the broadest reasonable interpretation of "application." However, a person of ordinary skill in the art would have interpreted the second sentence as stating that an "application" can, but need not, include an executable software program. In my opinion, therefore, the broadest reasonable construction of "**application**" is a "**unit of content on a network site**."

34. With respect to the term "configurable application," the patent explains that "[c]onfigurable applications **30** are those applications **30** that can be modified or configured by the content provider **22**." ('720, 5:45-46 (underlining added).) The patent also explains that a "content provider" is a broad concept that includes "potentially any person, machine, device or system that is responsible for providing content to a web site." ('720, 3:53-55.) In my opinion, therefore, the broadest reasonable construction of "**configurable application**" is an "**application that can be modified or configured**."

3. "link," "configurable link" and "application link"

35. Independent claims 1, 11, and 31 recite an "application link," while independent claims 2 and 7 recite a "configurable link."

36. The specification states that "[a] link **32** is the mechanism by which the user **50** of a network site **34** activates the application **30**" and "can encapsulate an URL (uniform resource locator), a TCP/IP address, of any other form of identifying the location of applications **30** on the network site **34**." ('720, 5:53-54 (underlining added), 5:54-57.) Therefore, the broadest reasonable construction of "**link**" is a "**mechanism to activate an application on a network site.**"

37. With respect to the term "configurable link," the specification explains: "A configurable link **32** is a link **32** that can be modified or configured by the content provider **22** as permitted by any relevant business rules." ('720, 5:62-65 (underlining added).) As I noted above, the '720 patent makes clear that the "content provider" is a broad concept that includes people, machines, devices and systems. ('720, 3:53-55.) In my opinion, the broadest reasonable construction of "**configurable link**" is a "**link that can be modified or configured as permitted by any relevant business rules**."

38. The term "application link" is mentioned in only two brief passages of the specification. ('720, 14:43-49 (stating that application links "can be assigned to headers"), 15:35-36 (discussing obtaining application links "for the current group").) Neither of these passages provides guidance on the definition of "application link." But the claims suggest that an "application link" is similar to a

"configurable link." For example, claim 1 recites that an "application link is generated by the computer based at least in part on a user-configured business rule." ('720, 22:39-41.) Claim 2 recites substantially the same limitation for "configurable link," stating that a *configurable* link is generated "based at least in part on . . . at least one rule that is configurable by a user." ('720, 23:14-17.) The requirement of "configurability," therefore, appears to also apply to the claimed application link. Accordingly, in my opinion, the broadest reasonable construction of "**application link**" is a "**link that can be modified or configured as permitted by any relevant business rules**."

4. "biography application" and "biographical information"

39. Each independent claim recites a "biography application" and "biographical information."

40. With respect to the claimed "biography application," the claims themselves state that a biography application has or displays "biographical information." This is consistent with the specification, which states that a "biography application" can "be used to provide biographical information about persons and groups of persons involved in the organization sponsoring the web site." ('720, 13:2-4.) I note that this sentence states that a biography application "**can**" provide biographical information about persons or groups of persons

"involved in the organization sponsoring the web site," but this does not appear to be a requirement of a biography application. In my opinion, therefore, a "**biography application**" is an "**application that provides biographical information**."

41. With respect to the term "biographical information," the patent describes it as including any type of information about a user. The specification states, for example, that "[t]he biography application **135** can display reporting relationships, direct phone numbers, subgroup affiliation, roles, contact information, and other useful information." ('720, 13:12-14.) Accordingly, in my opinion, the broadest reasonable construction of "**biographical information**" is "**information about a person or group of persons**."

5. "administrator portal"

42. Independent claims 2 and 7, and dependent claim 30, recite an "administrator portal." For example, claim 7 recites "an administrator portal through which users of the system are permitted to act in the role of an administrator of certain web pages." ('720, 23:64-66.)

43. As noted previously, the '720 patent states that "[a]n administrator console **60** or administrator portal is used to manage the applications **30** and/or business rules of the system **20**." ('720, 7:20-22.) The '720 patent also describes a

"portal" more generally as being part of an "interface" that allows access to the system. ('720, 4:44-47 ("[T]he content interface **26** includes a portal that allows the content provider **22** to access the input view and the output view in a simultaneous or substantially simultaneous manner.").) Therefore, in my opinion, the broadest reasonable construction of "**administrator portal**" is an "**interface for managing applications and/or business rules of the system**."

6. "business rule"

44. Each independent claim recites the term "business rule." For example, claim 7 recites "business rules that utilize profiles of the users of the system to control interaction of the users with the certain web pages." ('720, 23:67-24:2.) As explained above, the '720 patent states that "[a] business rule **80** is any rule incorporated into the system **20** that controls how the system **20** functions." ('720, 8:29-30 (underlining added).) "In preferred embodiments, the functionality of the various applications **30** can be customized and automated in accordance with the business rules **80**. Business rules **80** determine what can be viewed, and by whom." ('720, 13:34-37.) For example, "if an event **88** is only relevant to users **50** of a particular subgroup, the business rules **80** may hide the event 88 from other users **50**." ('720, 11:38-40.) Accordingly, in my opinion, the

broadest reasonable construction of "**business rule**" is a "**rule incorporated into the system that controls how the system functions**."

7. "communications application"

45. Various dependent claims recite a "communications application." For example, dependent claim 8 recites a "communications application" that "displays communications received from multiple users of the system." ('720, 24:25-27.)

46. The specification states:

> A communication application **130** can be used by users **50** to interact with the organization sponsoring the web site. The communications of the communication application **130** can include a frequently asked questions module, a broadcast module, and other types of passive and active communications. The broadcast module can include communications by e-mail, instant messaging, chat room posting, automated telephone calls, facsimiles, printed materials, letters, radio communication, satellite communication, or any other mechanism for transmitting information or interacting with others (collectively "communications"). The business rules **80** can trigger the automatic transmission of communications based on events **88**, user provided information, or any other attribute or characteristic tracked by the system **20**.
>
> Communications can be added, updated, deleted, and scheduled using the communication application **130**. Communications can be organized into a hierarchy of categories based on the subject matter,

> intended audience, and virtually any other characteristic or attribute relating to the communication.

('720, 12:24-43 (underlining added).)

47. The passage above appears to define "communications" as "transmitting information or interacting with others." (*Id.*) Accordingly, in my opinion, the broadest reasonable construction of "**communications application**" is an "**application that provides a mechanism for transmitting information or interacting with others**."

48. I note that, similar to the "biography application" described above, the passage above states that a communications application "**can** be used by users **50** to interact with the organization sponsoring the web site" (*id.*), which is a description of a potential use of a communications application, and is not a requirement of the term under its broadest reasonable construction.

IV. APPLICATION OF THE PRIOR ART TO THE CLAIMS

49. Counsel has informed me that Boyce and Parker qualify as prior art to the '720 patent because each was published more than one year before the earliest filing date on the face of the patent (February 13, 2003). I provide brief summaries of these references before applying them to the claims.

A. Brief Summary of Prior Art

1. Boyce [Ex. 1003]

50. **Boyce**, entitled "Microsoft Outlook Version 2002 Inside Out," is a textbook that details the features and operation of Microsoft Outlook and Microsoft Exchange Server. Boyce explains, as is generally known, that Microsoft Outlook can be used for, among other things, reading and sending e-mail, scheduling events, and managing contacts. (*See, e.g.*, Boyce, pp.xlii-xliii (describing contents of various parts of the book).) Boyce describes the setup and operation of Microsoft Exchange Server, "an incredibly feature-rich and versatile collaboration and messaging server," with which Microsoft Outlook can be integrated to provide messaging, data storage and account management, among other things. (Boyce, e.g., p.757, pp.xliv-xlv ("Where Outlook really shines, however, is in its integration with and as a client for Microsoft Exchange Server."), pp.769-771 (adding user accounts and mailboxes).)

51. My analysis of Boyce focuses primarily on two features provided by the Outlook/Exchange system. The first is "Outlook Web Access" ("OWA"), which is "enabled for all users by default when Setup installs Exchange 2000 Server." (Boyce, p.885; *see also id.*, p.101 ("Exchange Server supports access to your Exchange Server mailbox through Outlook Web Access (OWA), a server-side feature of Exchange Server.").) The second is "delegation," an Outlook feature

that allows a user to configure the system to allow other users to access the user's mailbox. (Boyce, pp.679-680.) I provide an overview of these features below.

(a) Outlook Web Access

52. As its name suggests, Outlook Web Access provides functionality of Outlook from a web site that can be accessed using an ordinary web browser. Boyce explains that "[w]ith OWA and a Web browser, users can send and receive messages, view and modify their calendars, and performs most of the other tasks available through Outlook or an Exchange server client." (Boyce, p.874; p.874 ("To access your mailbox through OWA, you can use any Web browser that supports JavaScript and HTML version 3.2 or later, including Internet Explorer 4.0 or later and Netscape 4.0 or later."), p.875 ("OWA functions primarily as a Web site hosted under IIS (Internet Information Services, the Web service included with Microsoft Windows NT and Microsoft Windows 2000)." (underlining added)), p.22 (explaining that "Hypertext Markup Language (HTML) is the protocol used most commonly to define and transmit Web pages.").)

53. For example, using OWA, a user's inbox (in this case, user Jim Boyce) can be accessed at a specified URL using a web browser:

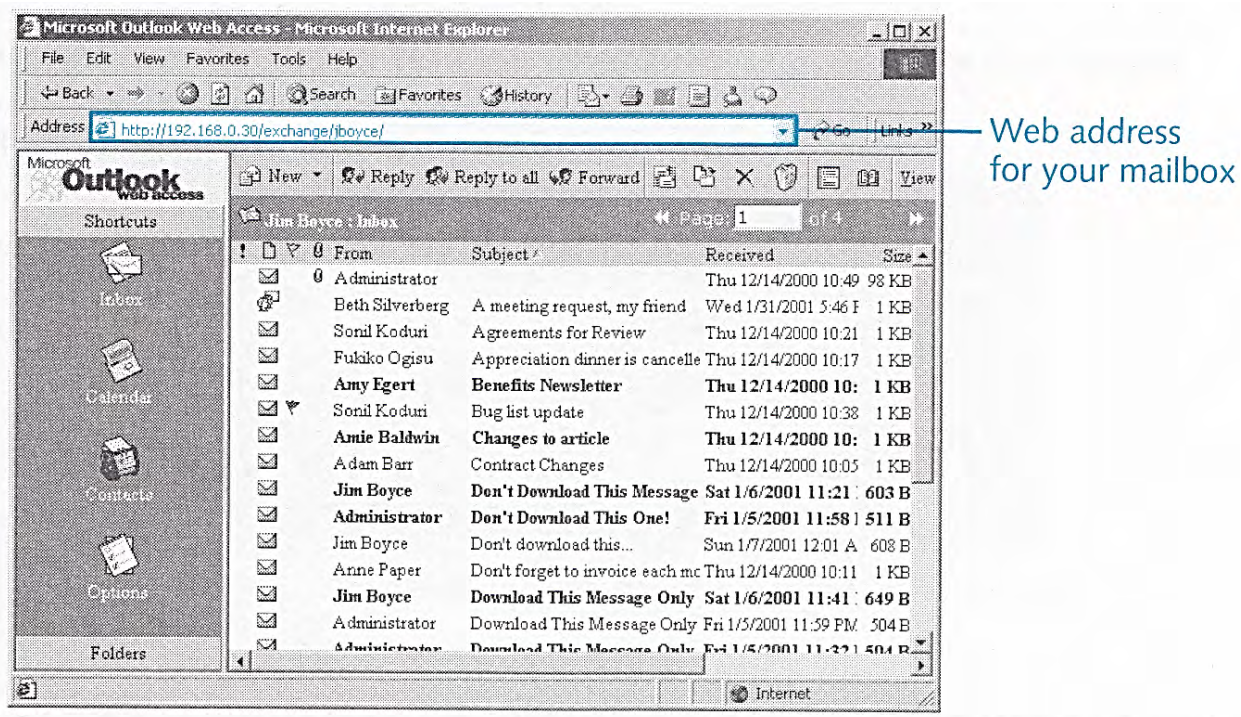
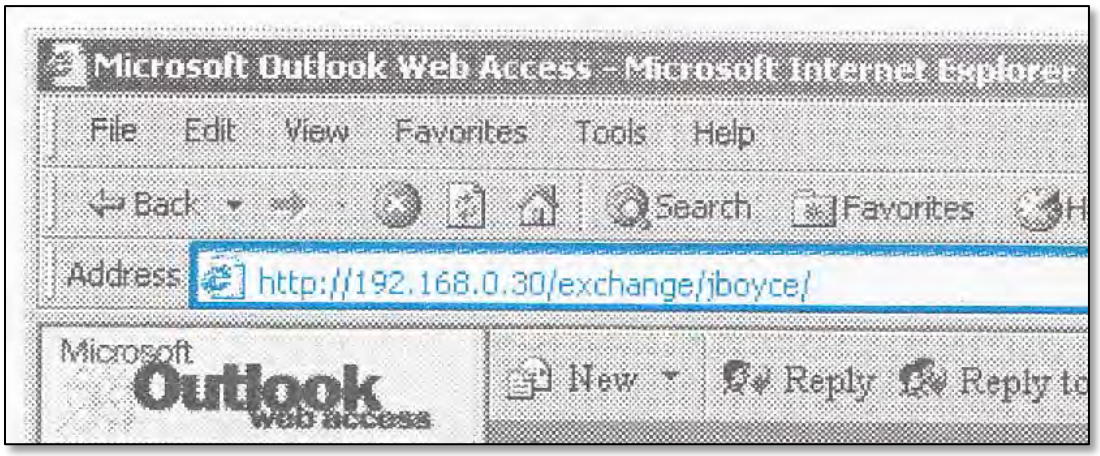


Figure 36-1. Using OWA, you can access your Inbox through a Web browser.

(Boyce, p.872.) As shown in Figure 36-1 above, and excerpted in part below, the URL for Jim Boyce's mailbox is <http://192.168.0.30/exchange/jboyce/>, where "jboyce" corresponds to the name associated with Jim Boyce's account:



(Boyce, p.872 (Fig. 36-1 excerpt), p.878 ("[C]lients add their account name [to the URL], such as *http://mail.proseware.tld/jboyce*." (underlining added)).)

54. The left pane area shown in Figure 36-1 above (which is referred to as the "Outlook Bar") shows four clickable icons including "**Inbox**," "**Calendar**," and "**Contacts**." (Boyce, p.890 (Figure 36-15 identifying "Outlook Bar" as the left pane area).) These icons allow the user to navigate to different types of content provided by OWA. The functionality of the "**Inbox**" icon was shown in Figure 36-1, reproduced above.

55. With respect to the "**Calendar**" icon, Boyce explains that "[t]o manage your schedule, click the Calendar icon on the Outlook Bar. OWA updates the right pane to display your Calendar folder," as shown below:

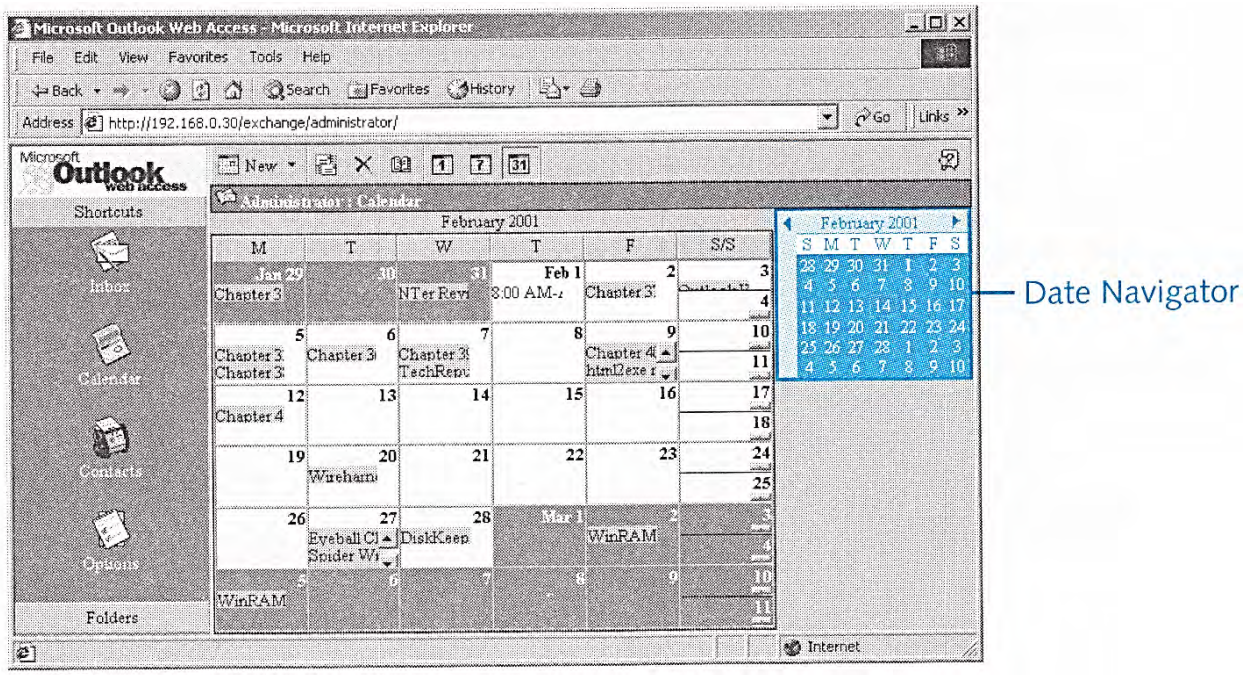


Figure 36-23. You can view and modify your schedule in OWA.

(Boyce, pp.897, 873 ("[Y]ou can also access your Calendar folder through OWA. You can view and modify existing items and create appointments (see Figure 36-2.)").)

56. With respect to the "**Contacts**" feature, Boyce also explains that "[y]ou can also view and manage contacts in OWA. Click the Contacts icon on the Outlook Bar to display the Contacts folder (see Figure 36-24). The default view is Address Cards, similar to the default view in Outlook," as shown below:

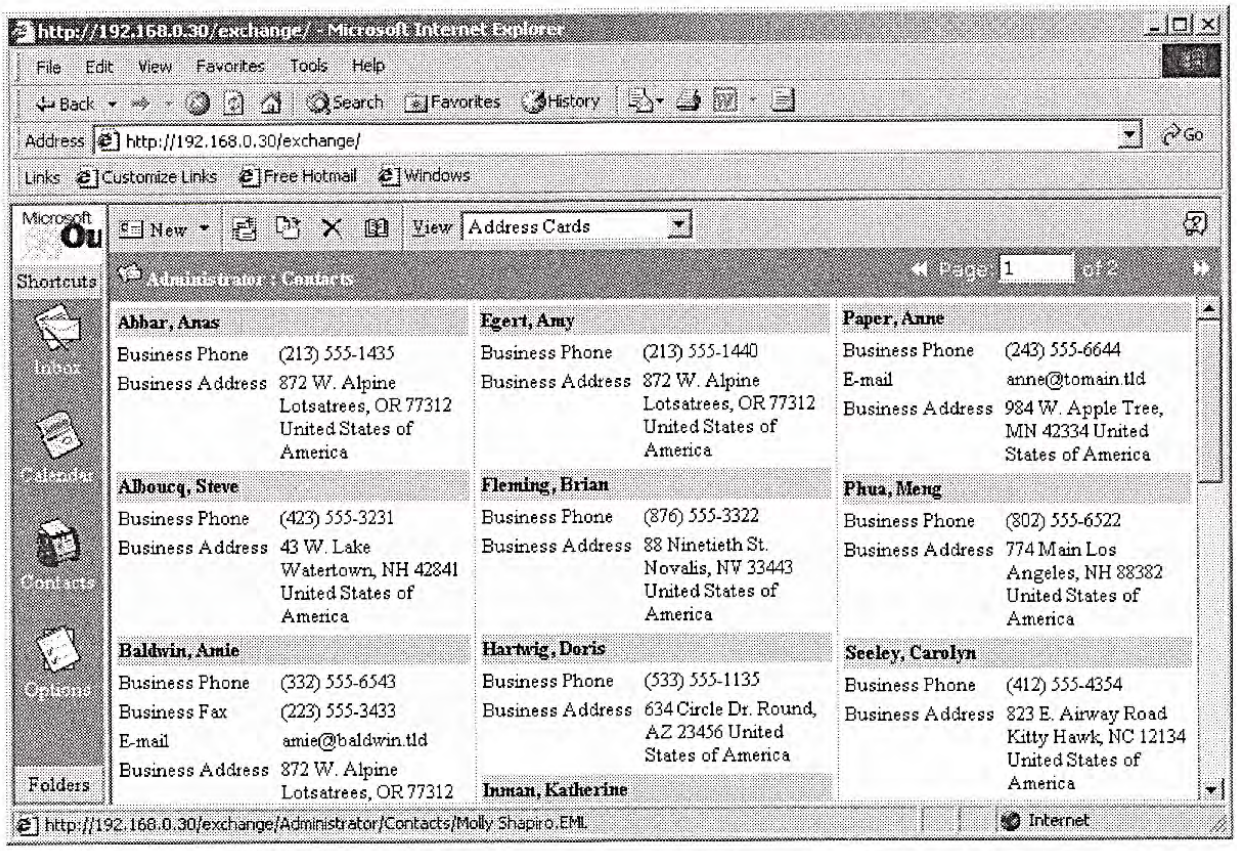


Figure 36-24. You can view and manage the Contacts folder in OWA.

(Boyce, p.898.) Boyce explains that to add a new contact, "Click New on the toolbar to open the form shown in Figure 36-25, which you can use to create new contact entries." (*Id.*)

(b) Delegation

57. "Delegation" refers to a feature in Outlook/Exchange that allows a mailbox owner to specify various ways that other users may access the mailbox owner's account. (Boyce, pp.679-680.) For example, a mailbox owner can use the delegation feature to "selectively restrict an assistant's access to your data."

(Boyce, p.679.) For example, a delegate may be given read-only or editor access to another user's inbox, calendar or contacts. (Boyce, pp.681-682.)

58. The user may first select one or more other users to serve as a delegate. (*Id.* at p.681 (Fig. 27-1).) The user may then select, for each delegate, what the delegate is allowed to view or do. An interface for managing the access permissions for a selected delegate is shown below:

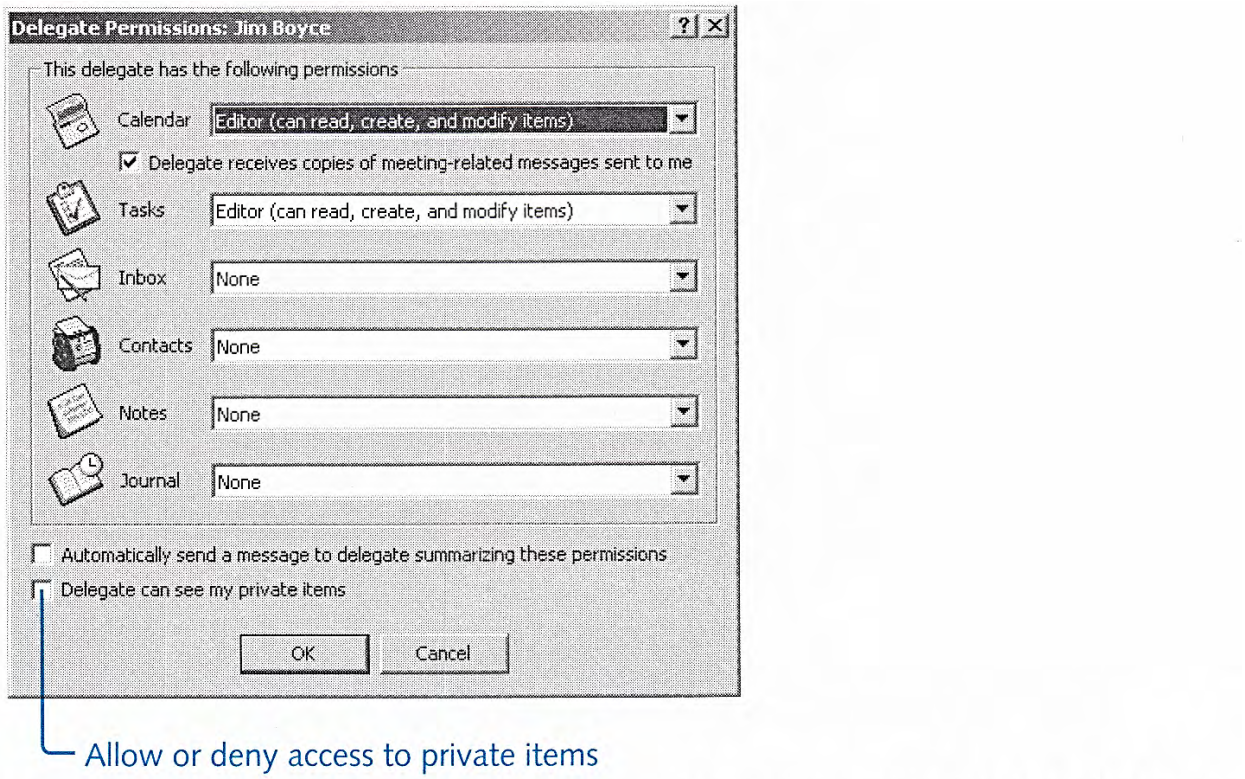


Figure 20-5. Use the Delegate Permissions dialog box to control the visibility of private items.

(Boyce, p.553; *see also id.*, pp.681-682.)

59. As shown in the figure above, and excerpted below, the delegation feature also includes an option for a user to specify whether the delegate can see the user's "private items":

(Boyce, p.553; *see also id.*, p.682 ("**Delegate Can See My Private Items.** Allows the delegate to view items you've marked as private. Clear this option to hide your private items.").) Messages, calendar items, and contacts may be marked private. (Boyce, p.809 ("For example, you might let a delegate view your existing calendar items and create new ones but prevent the delegate from viewing items marked as private." (underlining added)), p.683 (describing delegate restrictions on a calendar), p.794 (describing "message sensitivity" and explaining that "[y]ou can set one of four levels of sensitivity—Normal, Personal, Private, or Confidential."), p.179 (message sensitivity), p.383 (Figure 14-2 showing "Private" checkbox in lower right corner of window displaying contact information), p.74 (Figure 3-16,

"Private" checkbox for contact information), p.9 (Figure 1-5, "Private" checkbox for contact information).)

60. Boyce also explains that a delegate may or may not have "Folder Visible" privileges for a particular folder, such as the inbox, calendar or contacts folders. (Boyce, p.684.) A user who has "Folder Visible" privileges for a folder "can see the folder." (Boyce, p.687.)

61. Boyce makes clear that delegation functionality is incorporated into Outlook Web Access. Describing the process for accessing an account using OWA, Boyce states that "[e]xplicit logon is useful when you need to access a mailbox you don't own but for which you have access permission." (Boyce, p.878.) This statement refers to a delegate, who is a person who can access a mailbox that they do not own.

2. Parker [Ex. 1004]

62. I have relied on Parker as a secondary reference in combination with Boyce. As I will establish below, Boyce teaches, discloses, and makes obvious each limitation of claims 1-31. However, to the extent there is any question that Boyce alone does not fully disclose and render obvious that the "link" that I identify in Boyce qualifies as a "configurable link" or an "application link" as recited in the various claims, I cite additional teachings from Parker.

63. U.S. Patent No. 5,729,734 to Robert D. Parker et al. ("**Parker**"), entitled "File Privilege Administration Apparatus and Methods," discloses various user interface techniques to display the privileges of individual users to access what Parker calls a server "sharepoint," which is defined in Parker as "an item, e.g., a file, a folder, a volume, a hard disk, or the like, that is capable of being shared by the network users." (Parker, 2:24-26.)

64. Parker explains that folders (or other "sharepoints") may be displayed to a particular user in a way that visually indicates the access privileges granted to that user. This is shown in the user interface of Figure 7, which shows a directory listing exactly as it would be seen by a user of the system named "User C":

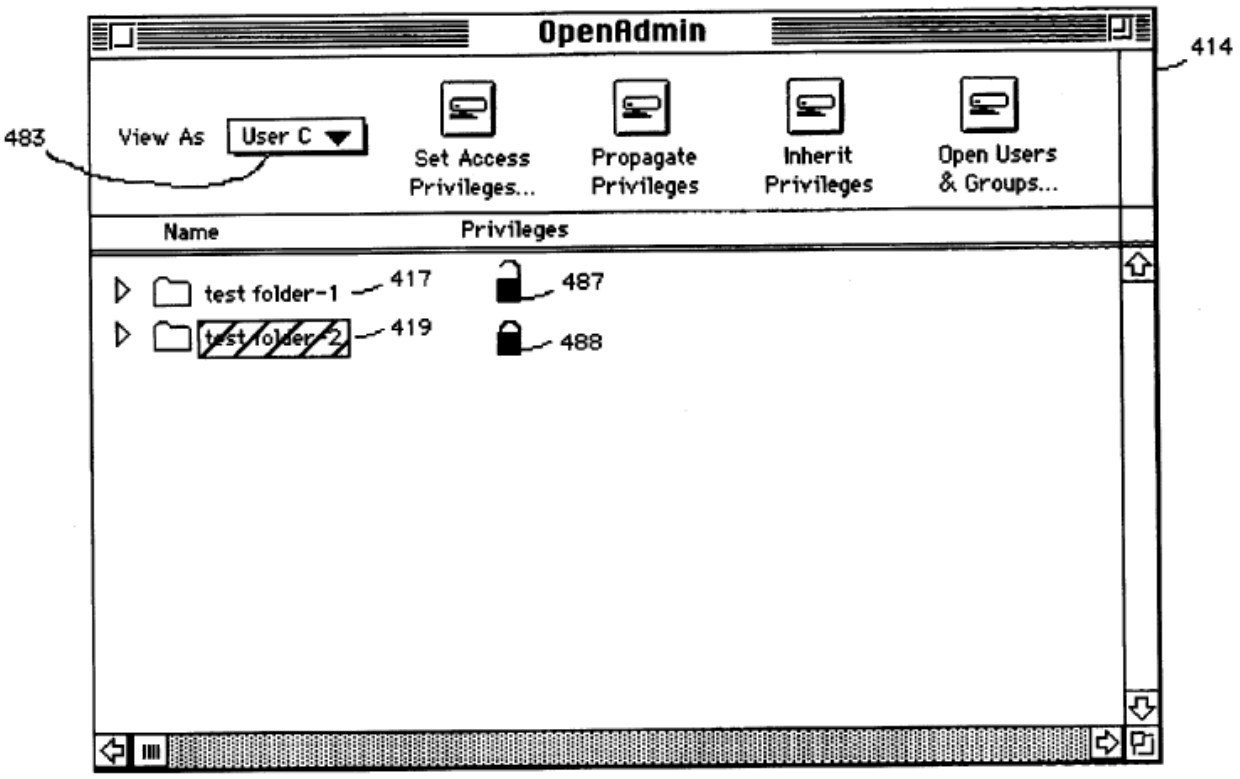


FIG. 7

(Parker, Fig. 7.)

65. Parker explains that the display in Figure 7 shows how "User C" would see the two folders (**417**, **419**) on its screen. (Parker, 11:32-35 ("When the administrator views as user C, the administrator is viewing from user C's perspective (i.e., in accordance with user C's access privileges as if the administrator was sitting at user C's client terminal).").) In the example above, because the administrator did not grant "User C" rights to "test folder-2" (**488**), that folder will appear grayed out or with a lock icon. Parker explains that there are various ways that a user's privileges can be indicated visually:

> Since the administrator granted user C read access privileges to test folder-1 (**417**) in FIG. 5, test folder-1 (**417**) is shown to be accessible in FIG. 7 (by open lock icon 487 and by the fact that "test folder-1" is not ghosted, grayed out, or hidden). On the other hand, test folder-2 (**419**) is in a ghosted state indicating no access to test folder-2. In other embodiments, test folder-2 (**419**) may be grayed out, shaded, or hidden altogether. The indication of no access to test folder-2 is consistent with the administrator setting of user C's access to "None" in FIG. 6.

(Parker, 11:40-49 (underlining added).)

> In one embodiment, it is envisioned that a user accessing the network via its user privilege, will be able to distinguish whether the listed sharepoints are inaccessible, or accessible for read & write, read-only or write only via various access indicating icons. For illustration purposes, an open or closed lock icon will denote respectively user access privilege granted or no user access privilege. The open lock icon **487** is shown associated with sharepoint test folder-1 indicating access privilege for user C for this item. The closed lock icon **488** is shown associated with sharepoint test folder-2 indicating no access privileges. Alternative embodiments may include, but are not limited to, a set of "eye glasses" indicating read privileges, a "lock and key" indicating no access and a "writing instrument" indicating write privileges.

(Parker, 11:50-64 (underlining added).)

B. Summary of Application of Prior Art to Claims

66. As I explain below, each of claims 1-31 is disclosed by and obvious over Boyce in view of Parker. I will start my analysis by applying the prior art to representative claims 7-10 because, in my opinion, those claims provide the best foundation for applying the particular references cited in this Declaration. I will then turn to the remaining claims. In the interests of brevity, where the language of other claims is substantially similar to claim 7, I will note this fact and incorporate my analysis of claim 7 as applicable and also address (to the extent applicable) any differences in the limitations in these other claims.

C. Claims 7-10

67. All limitations of claim 7-10 are disclosed and rendered obvious by Boyce in view of Parker.

1. Claim 7

68. The preamble of claim 7 recites, "[a] method for managing content that is stored on a system and that is displayable on a web site to users of the system who have profiles saved in the system, the method being implemented on at least one computer having non-transitory computer-readable storage medium with an executable program stored thereon," with the method comprising steps recited in the limitations that follow. Assuming the preamble of claim 7 provides a claim limitation, it is fully disclosed by Boyce.

69. The preamble first recites "**a method for managing content that is stored on a system**." The '720 patent explains that "managing" includes "creat[ing], updat[ing], delet[ing], or schedul[ing]." ('720, 5:8-10, 5:6-18.) As I explain in the limitations that follow, Boyce discloses that OWA allows a user to **manage content**—such as e-mail messages, calendar items and contacts—by, for example, creating, sending and deleting messages; creating, scheduling and modifying calendar items; and creating and modifying contacts. (Boyce, e.g., p.872 (stating that, with OWA, "[u]sers can view messages header and read messages (see Figure 36-1) as well as send, reply to, forward, and delete messages."), p.873 ("[Y]ou can also access your Calendar folder through OWA. You can view and modify existing items and create appointments (see Figure 36-2.)"), p.873 ("Contacts are another type of item that you can manage through OWA. You can view and modify existing contact items and add new ones.").)

70. In addition, Boyce discloses that the content—such as e-mail messages, calendar items and contacts—is **stored on a system**. Boyce explains that a user "access[es] a mailbox on the Exchange Server through OWA." (Boyce, p.875.) A mailbox on an Exchange Server stores e-mail messages, calendar items, and contacts among other things. (Boyce, p.790; *see also id.*, p.49 ("Outlook 2002 offers three options for storing data: your Exchange Server mailbox, your PST

files, and Offline Folder (OST) files. A store holds your Outlook data, including your Contact, Calendar, and other folders. You can have only one default store. This means that your e-mail, contacts, schedule, tasks, and other information are all stored in the same set of folders." (underlining added)).) Boyce further makes clear that an Exchange Server qualifies as a "system," describing an "Exchange Server computer," several of which are depicted in the figure below:

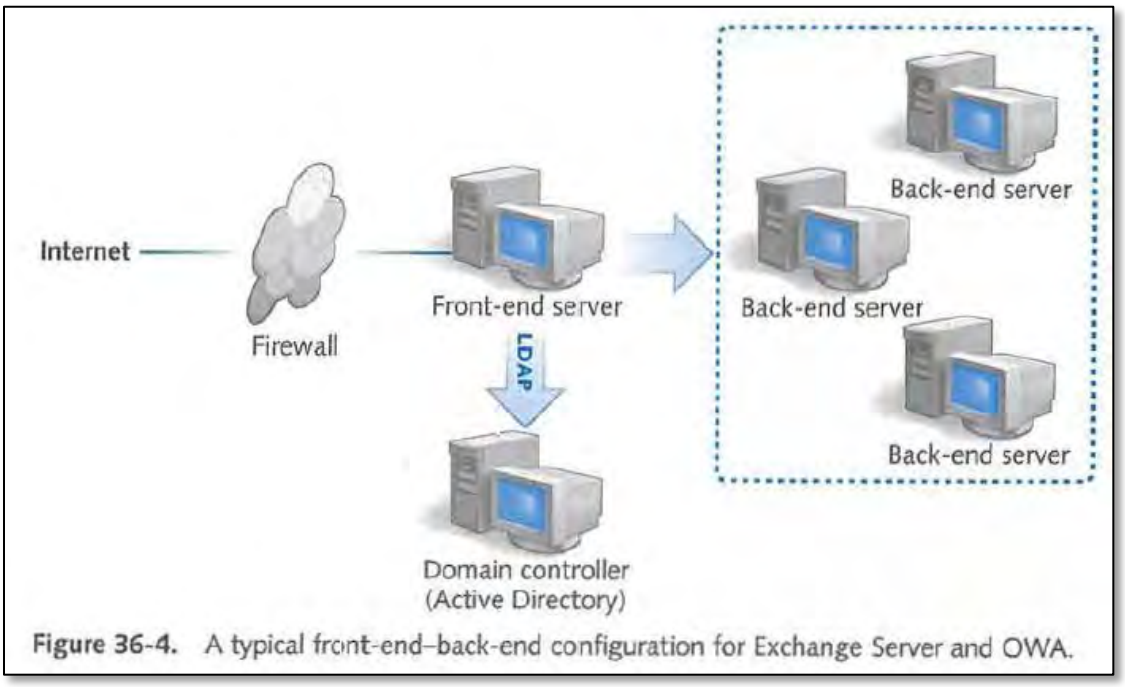


Figure 36-4. A typical front-end–back-end configuration for Exchange Server and OWA.

(Boyce, pp.876-877.)

71. The preamble next recites that the content "**is displayable on a web site to users of the system**." Boyce explains "OWA functions primarily as a Web site" and that, "[w]ith OWA and a Web browser, users can send and receive messages, view and modify their calendars, and performs most of the other tasks

available through Outlook or an Exchange server client." (Boyce, pp.874-75; *see also id.*, p.874 ("To access your mailbox through OWA, you can use any Web browser that supports JavaScript and HTML version 3.2 or later, including Internet Explorer 4.0 or later and Netscape 4.0 or later."), p.875 ("OWA functions primarily as a Web site hosted under IIS (Internet Information Services, the Web service included with Microsoft Windows NT and Microsoft Windows 2000)." (underlining added)).)

72. For example, using OWA, a user's inbox, calendar, and contacts can be accessed and displayed using a web browser, as shown in the figures below:

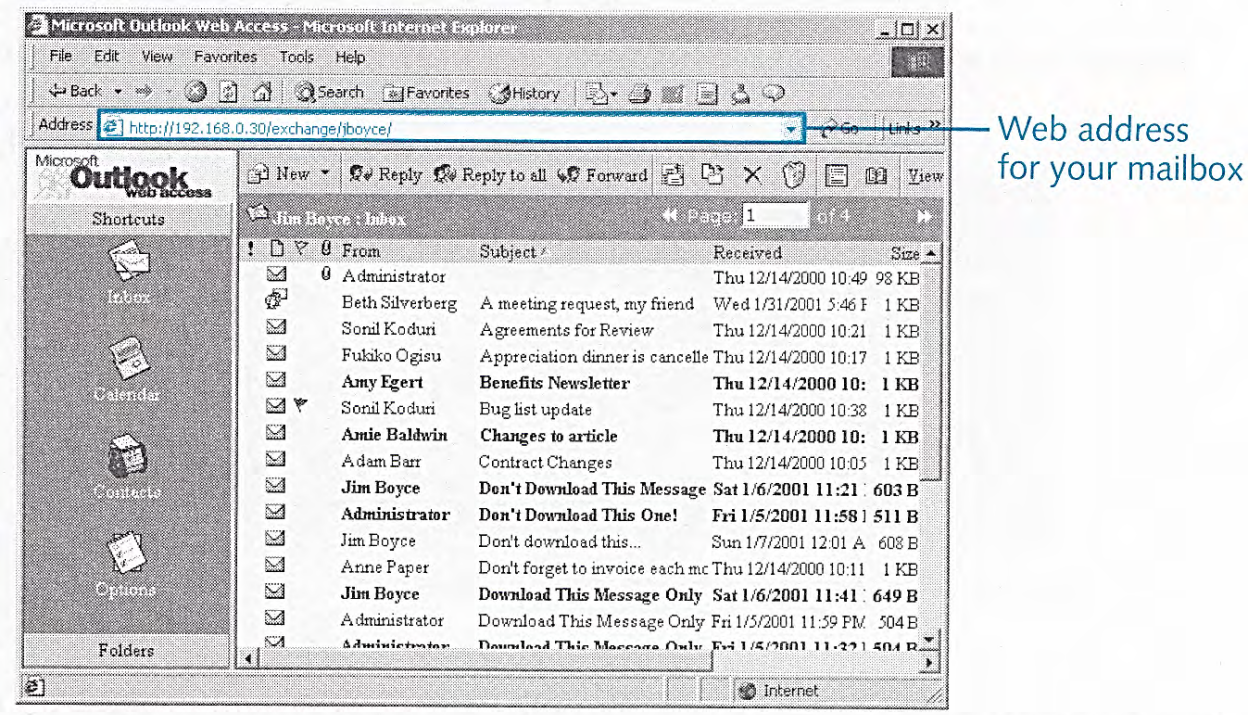


Figure 36-1. Using OWA, you can access your Inbox through a Web browser.

(Boyce, p.872.)

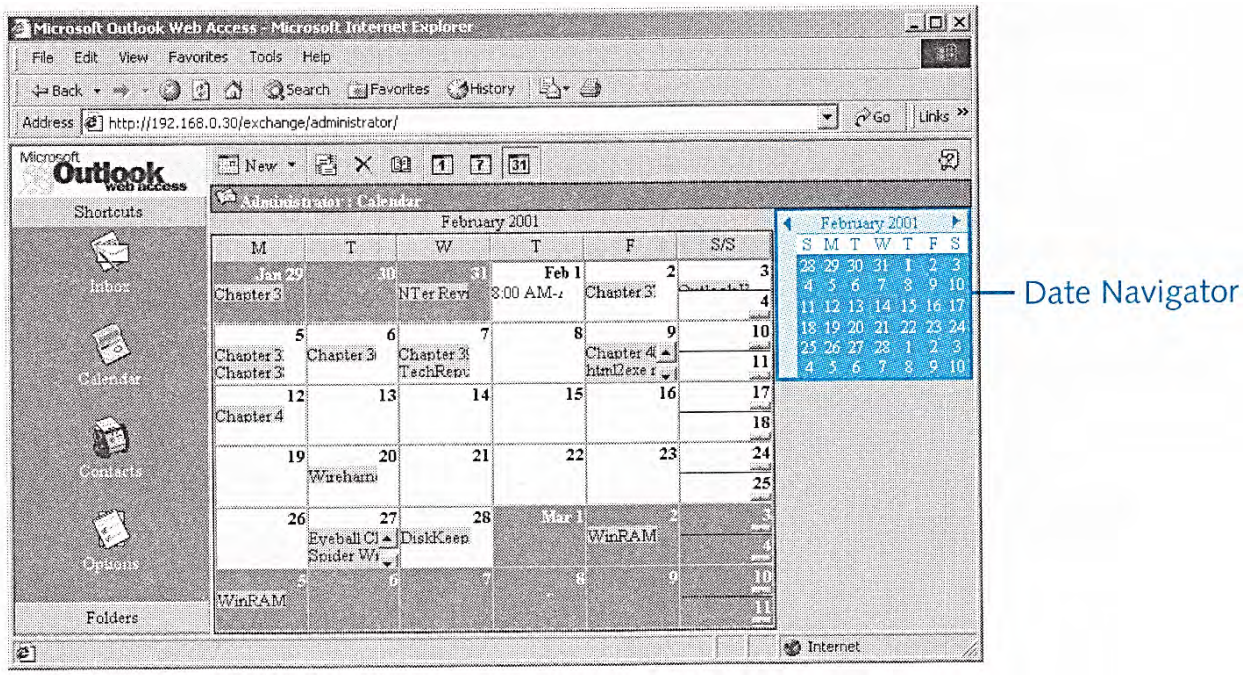


Figure 36-23. You can view and modify your schedule in OWA.

(Boyce, p.897.)

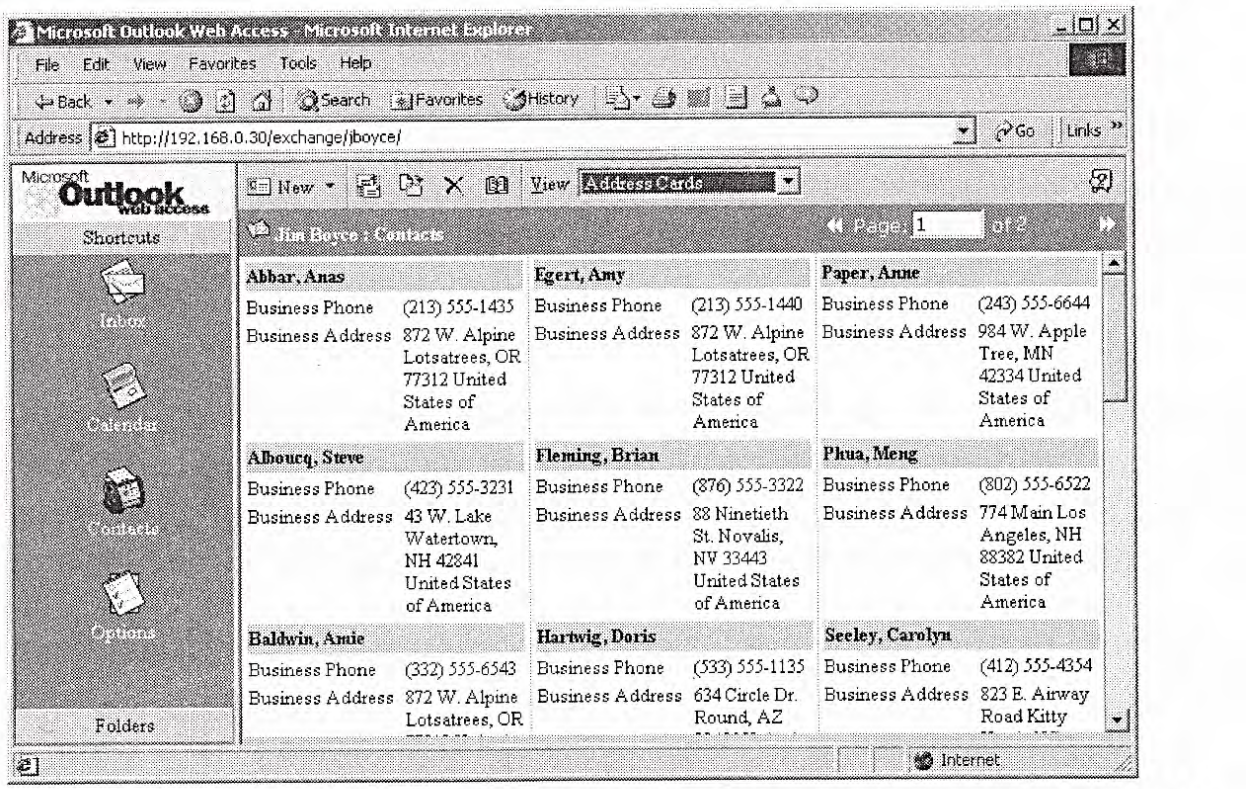


Figure 36-3. You can also work with your Contacts folder through OWA.

(Boyce, p.874)

73. As to "**users**," plural, Boyce states that "OWA is enabled for all users by default when Setup installs Exchange 2000 Server." (Boyce, p.885.)

74. The preamble next recites that the users of the system "**have profiles saved in the system**." As I discussed above, the broadest reasonable construction of the terms "profile" and "user profile" is "information comprising attributes relating to a user of the system." Boyce discloses "**profiles**" at least in the form of user account information. Boyce makes clear that each OWA user has an associated account that includes attributes such as the user's first name, last name,

user logon name, mailbox alias, and password. (Boyce, pp.769-70; p.890 ("Depending on the server's authentication settings, you might be prompted to log on [to access OWA]. Enter your user name and password for the Exchange Server account.").) The figure below, for example, depicts various attributes for a particular user named Aaron Con:

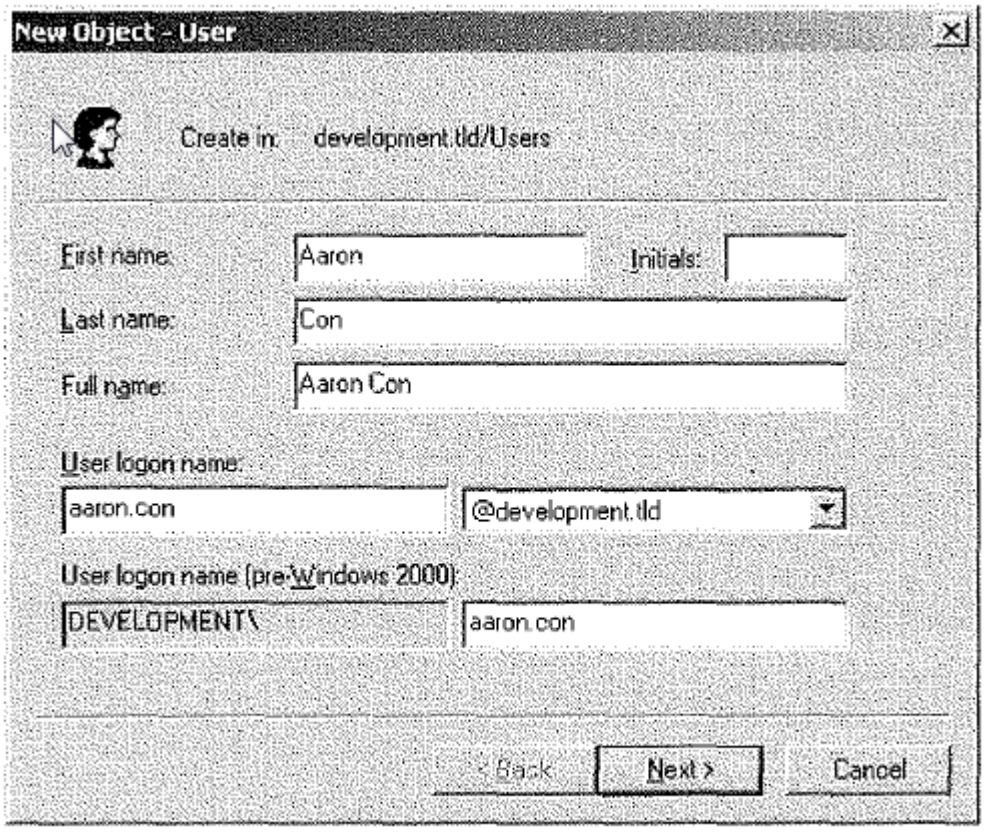


Figure 31-11. Specify the user's name and logon name.

(Boyce, p.769.)

75. Boyce also discloses that a user's profile is "**saved in the system**." Boyce explains that account information is stored as an object in the Active

Directory database for the system. (Boyce, p.769 ("You add mailboxes in Windows 2000 with Exchange 2000 Server at the same time that you add the user account (they are essentially the same object in Active Directory) from the Active Directory Users And Computers tool."), pp.761-62 (discussing storage location for Active Directory database and logs).) The figure below depicts an exemplary arrangement of computers for the system that includes a computer for Active Directory:

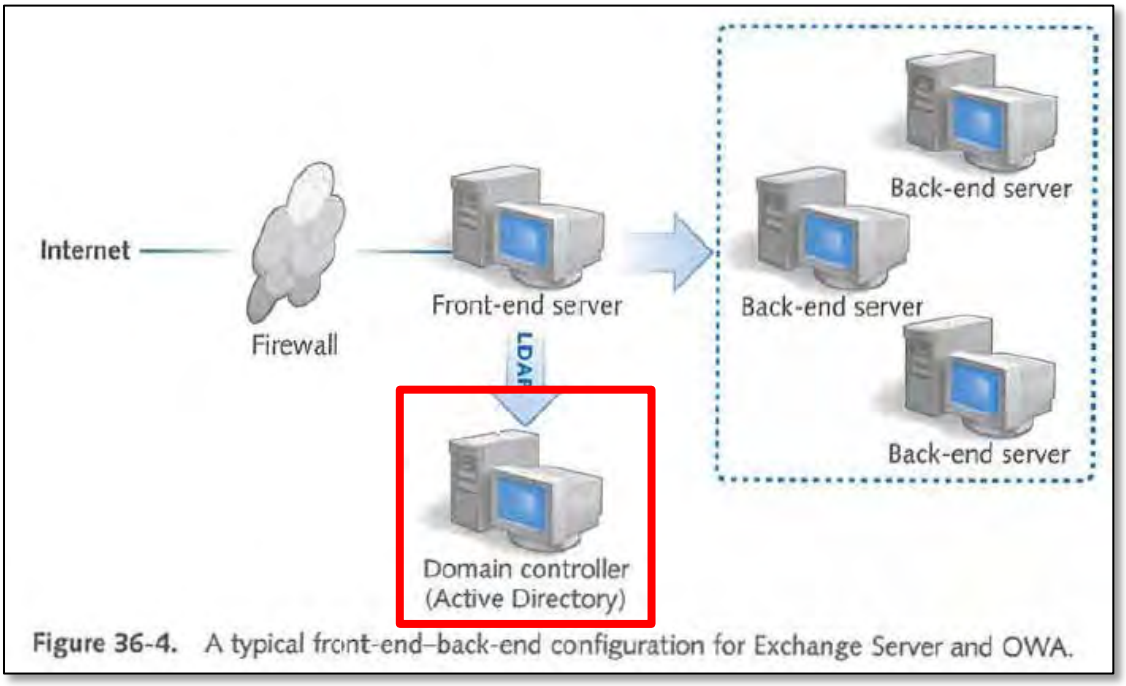


Figure 36-4. A typical front-end–back-end configuration for Exchange Server and OWA.

(Boyce, pp.876-877 (red box added).)

76. Lastly, the preamble recites that the method is "**implemented on at least one computer having non-transitory computer-readable storage medium with an executable program thereon**." As shown in the limitations that follow,

the "executable program" comprises functionality provided by web browser software (for displaying OWA pages), Exchange Server software, and Outlook software. As a person of ordinary skill in the art knows, and Boyce expressly discloses, software for a computer is installed and stored on a non-transitory computer-readable storage medium, such as a hard disk drive. For example, Boyce includes an entire chapter on setting up Exchange Server, including a discussion of installing Exchange Server. (Boyce, pp.758-68.) Boyce makes clear that Exchange is installed on a computer-readable storage medium. (Boyce, e.g., p.766 (Figure 31-9 showing "Install Path: C:\Program Files\Exchsrver" and "Drive C: 250 MB Requested 449 MB Remaining.").) Boyce also includes an Appendix A that provides instructions for installing Outlook software, including selecting the target directory into which Outlook will be installed. (Boyce, p.1092 (Figure A-2 showing "Install to: C:\Program Files\Microsoft Office\"); *see generally id.*, pp.1091-97.)

77. I note that the preamble recites "at least one computer" having the storage medium on which the executable program is stored, while for Boyce I have identified the executable program as comprising Exchange Server software, Outlook software and web browser software, which arguably are not all typically

installed on the same physical machine. However, this is not a meaningful distinction, for two reasons.

78. First, I note that the specification of the '720 provides a description of "computer" that can include more than one physical machine. In fact, a '720 patent "computer" can include an entire network of computers:

> The computer or computer system (collectively the "computer") **28** is any device capable of housing the programming logic that allows the system **20** to function. The computer can be a stand alone computer, a server, a mainframe computer, a mini-computer, a web server, an Internet server, an intranet server, an extranet server, a local area network (LAN), a wide area network (WAN), a wireless network, or any other form of computational device.

('720, 4:64-5:4 (underlining added).) Accordingly, the collection of Exchange Server software, Outlook software and web browser software is stored on "at least one computer" even if the pieces may be stored on separate physical machines.

79. Second, even if it is found that the claim requires that the executable program be stored on a single, self-contained physical machine, the claim is still obvious over Boyce. Boyce acknowledges, for example, that Exchange 2000 Server can be installed on a single server or in a test environment to become familiar with it. (Boyce, p.758.) As part of the testing and familiarization process, it would have been obvious to also install Outlook software and web browsers on

the same machine. A person of ordinary skill in the art would have recognized that there would have been no technical obstacle in doing so, and that it would have made testing the full features of the system simpler and more economical. Having addressed the preamble, I now address the limitations of claim 7.

(a) "executing the program stored on the computer-readable storage medium, wherein the program instructs the at least one computer to:" (Claim 7[a])

80. Boyce discloses this limitation. As I noted above, the "program" corresponds in Boyce to the collection of Exchange Server software, Outlook software and web browser software, which I refer to as "OWA software." As I explain below, Boyce discloses that the OWA software is executed to instruct the at least one computer to carry out the steps in the claim.

(b) "generate at least a first configurable application and a second configurable application, each configurable application having displayable content, wherein the generation of at least one of the configurable applications is based at least in part on inputs received from multiple users of the system, the inputs including at least one of text, graphics, sounds, documents, and multi-media content and wherein one of the applications is a biography application having biographical information that is received from and that is about one of the users of the system" (Claim 7[a][1])

81. Boyce discloses this limitation. In light of the length of this claim limitation, I divide it into pieces to ensure that I cover all of its requirements.

"generate at least a first configurable application and a second configurable application, each configurable application having displayable content"

82. The "**first configurable application**" in Boyce takes the form of a web page provided by Outlook Web Access for viewing and managing a user's inbox. The "**second configurable application**" corresponds in Boyce to the web page provided by Outlook Web Access for viewing and managing a user's contacts or alternatively for viewing and managing a user's calendar.

83. Boyce makes clear that the OWA software **generates** each of the inbox, contacts, and calendar pages. In particular, Boyce explains that "[w]hen you connect to your mailbox [using OWA], you should see a page similar to the one shown in Figure 36-15 for Exchange 2000 Server or Figure 36-16 for Exchange Server 5.5." (Boyce, 890.) Figure 36-15, which depicts the inbox page for a user named "Administrator" with annotations provided by the author, is reproduced below:

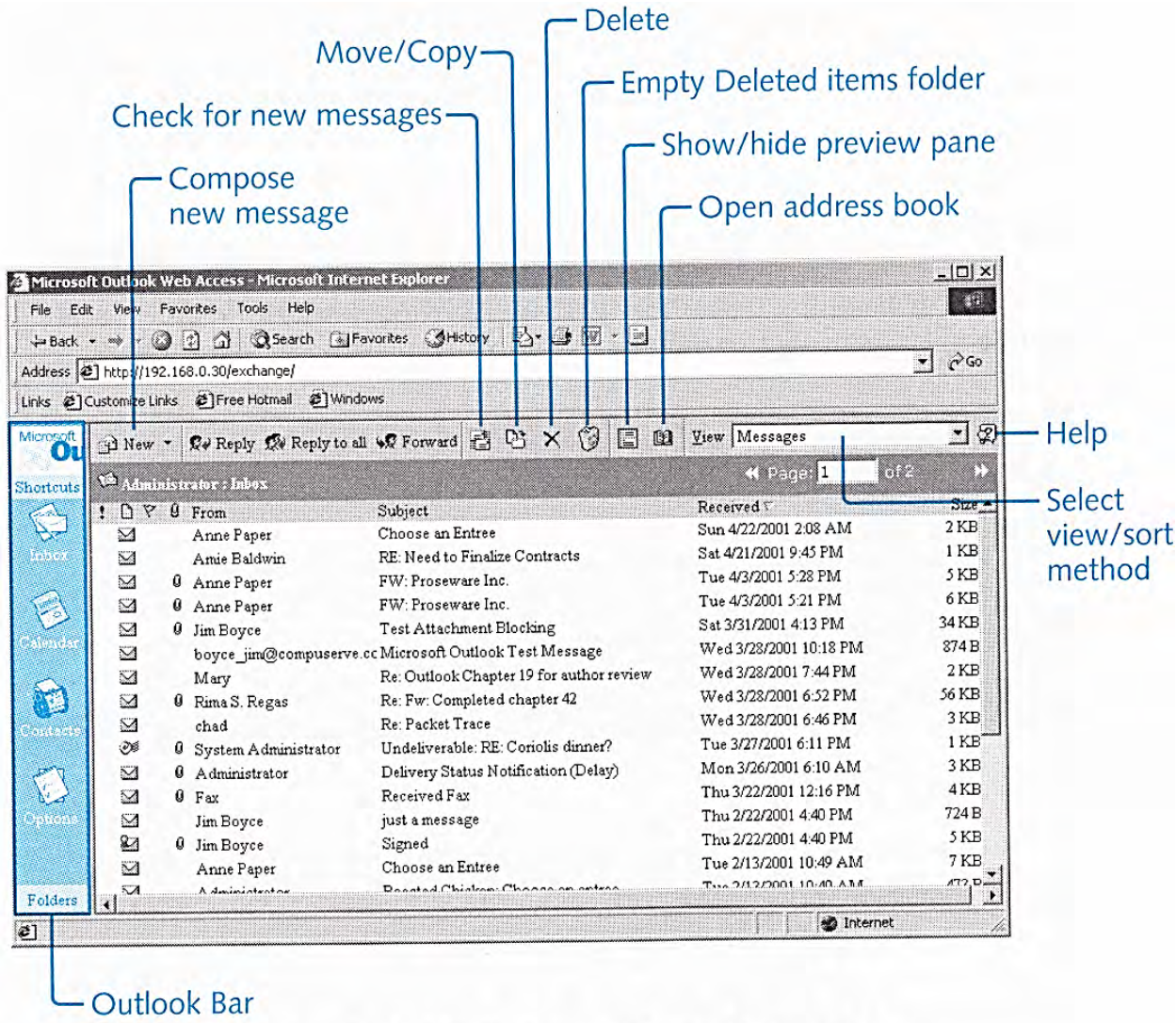


Figure 36-15. This is a typical look at a mailbox in OWA 2000.

(Boyce, p.891.)

84. Boyce explains that OWA pages are generated by the Exchange Server as replies to requests from a web browser based on current mailbox data that, as I have explained above, is stored on the system. For example, Boyce states that "OWA in Exchange 2000 Server relies on HTML and DHTML," and explains

that HTML "is the protocol used most commonly to define and transmit Web pages." (Boyce, p.875, p.22 (underlining added).) When a user's browser connects to OWA, the system "passes the request to the Exchange Server and transmits replies back to the client." (Boyce, p.875.) The page returned to the user's browser is generated based on the current contents of the user's mailbox. (Boyce, e.g., p.894 ("If you maintain a lot of messages in your Inbox, they probably won't all fit on one page. OWA displays the number of pages in your Inbox at the top of the window to the right of the toolbar. You can type a page number or use the arrow buttons to page through the Inbox.").)

85. The inbox, contacts, and calendar pages qualify as "**applications**." As I explained in **Part III.C** above, the broadest reasonable construction of "application" is "unit of content provided on a network site." As shown in the figure below, each page includes content, such as text related to messages, contact items, and calendar events, that is provided on a web site (i.e., "network site"):

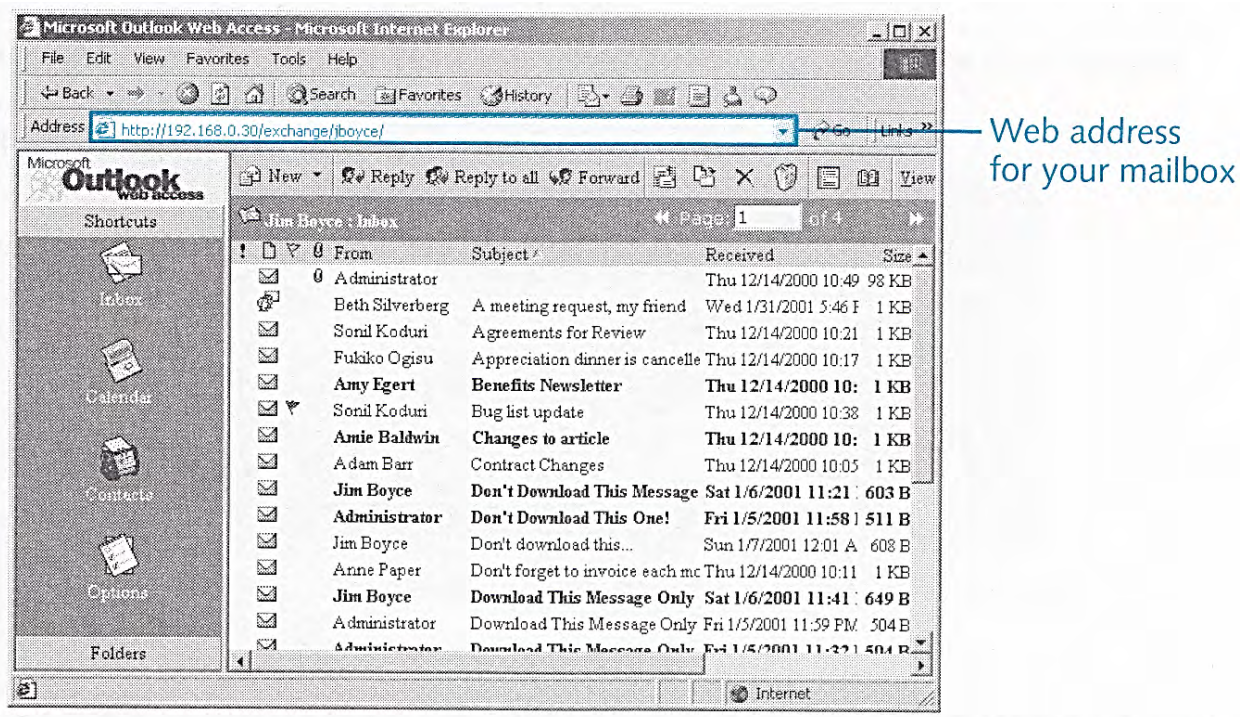


Figure 36-1. Using OWA, you can access your Inbox through a Web browser.

(Boyce, p.872.)

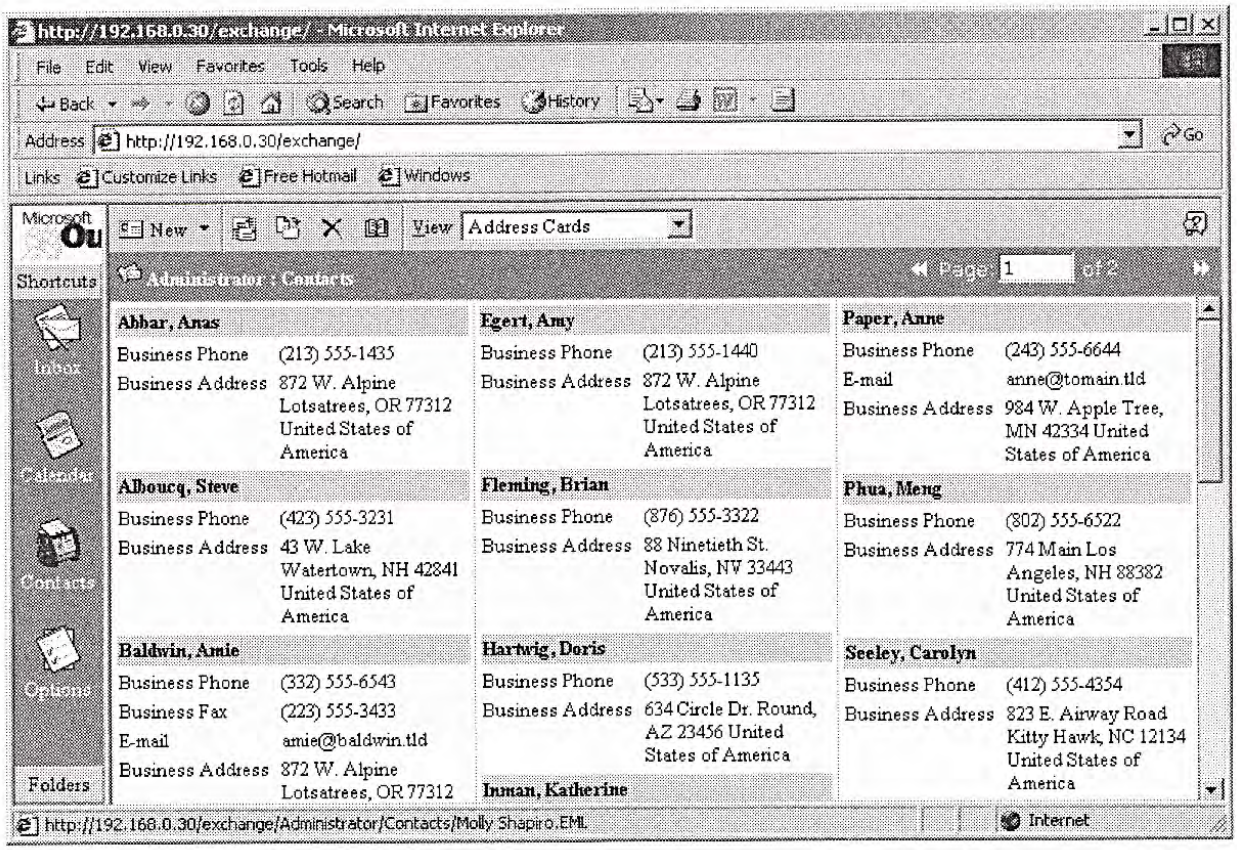


Figure 36-24. You can view and manage the Contacts folder in OWA.

(Boyce, p.898.)

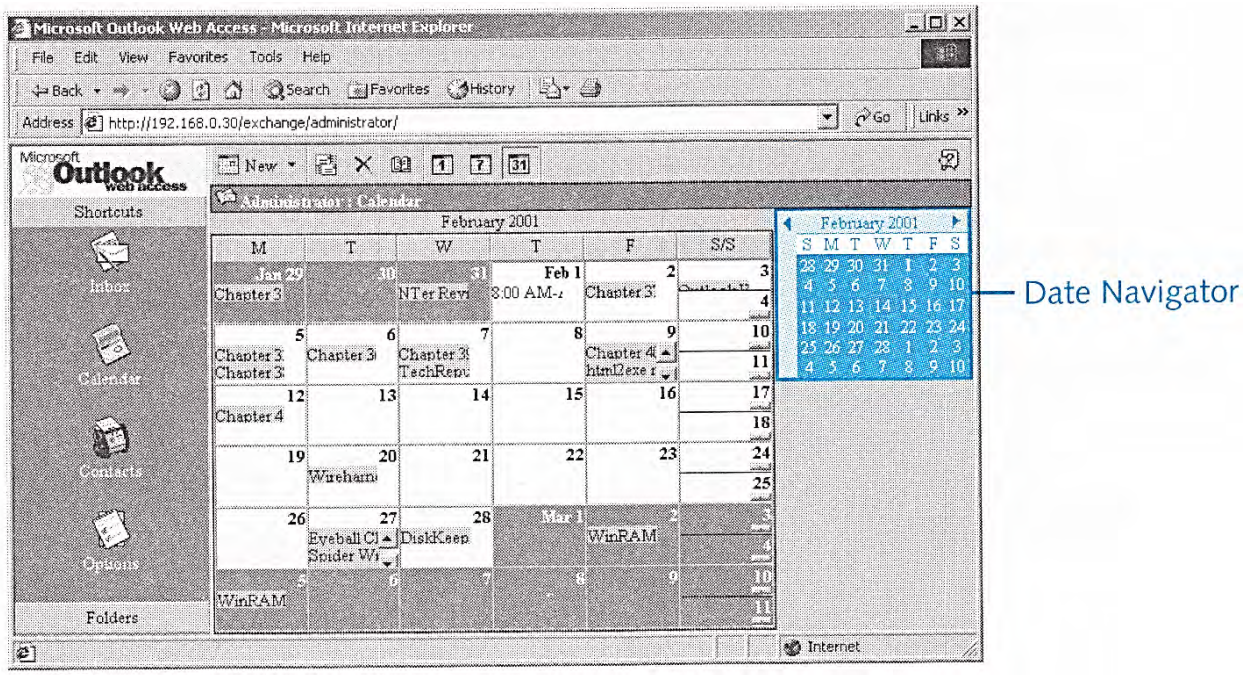


Figure 36-23. You can view and modify your schedule in OWA.

(Boyce, p.897; *see also id.*, p.875 ("OWA functions primarily as a Web site hosted under IIS (Internet Information Services, the Web service included with Microsoft Windows NT and Microsoft Windows 2000)." (underlining added)).) The '720 patent confirms that a web site qualifies as a "network site," collectively identifying "web sites on the World Wide Web, Internet sites, intranet sites, extranet sites, and other network interfaces" as "web sites." ('720, 1:20-23.)

86. The inbox, contacts, and calendar pages also qualify as "**configurable applications**." As I explained in **Part III.C** above, the broadest reasonable construction of "configurable application" is "application that can be modified or

configured." As Boyce explains, the inbox, contacts, and calendar pages can be modified or configured.

87. Boyce discloses various ways in which the applications are "**configurable**." First, Boyce explains that OWA allows a user to configure the inbox, contacts, and calendar pages for their account by, for example, creating, sending and deleting messages; creating and modifying contact items; and creating, scheduling and modifying calendar items. (Boyce, e.g., p.872 (stating that, with OWA, "[u]sers can view messages header and read messages (see Figure 36-1) as well as send, reply to, forward, and delete messages."), p.873 ("[Y]ou can also access your Calendar folder through OWA. You can view and modify existing items and create appointments (see Figure 36-2.)"), p.873 ("Contacts are another type of item that you can manage through OWA. You can view and modify existing contact items and add new ones.").) Second, as discussed in more detail below for claim 7[a][2], Boyce explains that users can configure their inbox, contacts, and calendar pages by managing associated delegate settings, including which users can view a delegating user's inbox, contacts, and/or calendar and what inbox, contacts and calendar content those delegated users can view.

88. Lastly, the inbox, contacts and calendar pages all have **displayable content**. As shown in the figures above, each of those pages is displayed in a user's web browser.

"wherein the generation of at least one of the configurable applications is based at least in part on inputs received from multiple users of the system, the inputs including at least one of text, graphics, sounds, documents, and multi-media content"

89. As I noted above, I have identified the "first configurable application" as corresponding in Boyce to the web page for a user's inbox. Boyce teaches that this inbox page is generated based on input such as text received from multiple users of the system.

90. As shown in the figures below, the inbox page shows messages received from multiple users of the system, such as "Jim Boyce," "Fukiko Ogisu," "Amie Baldwin," and "Anne Paper":

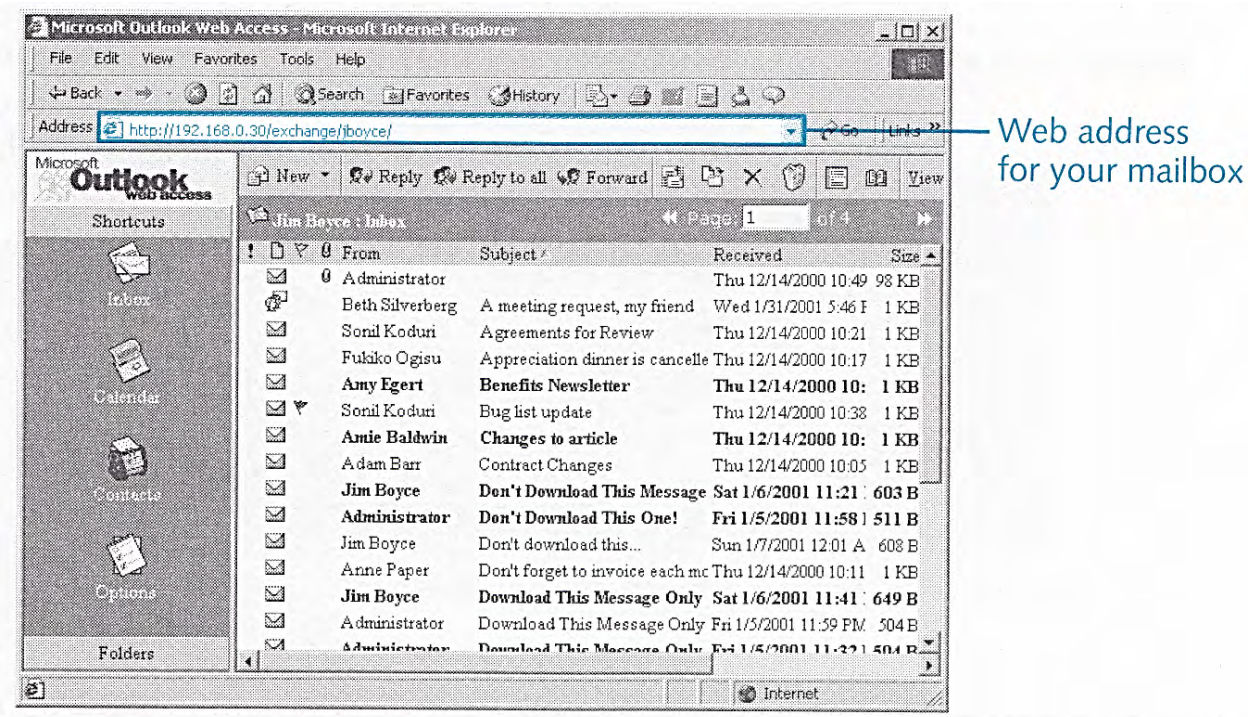
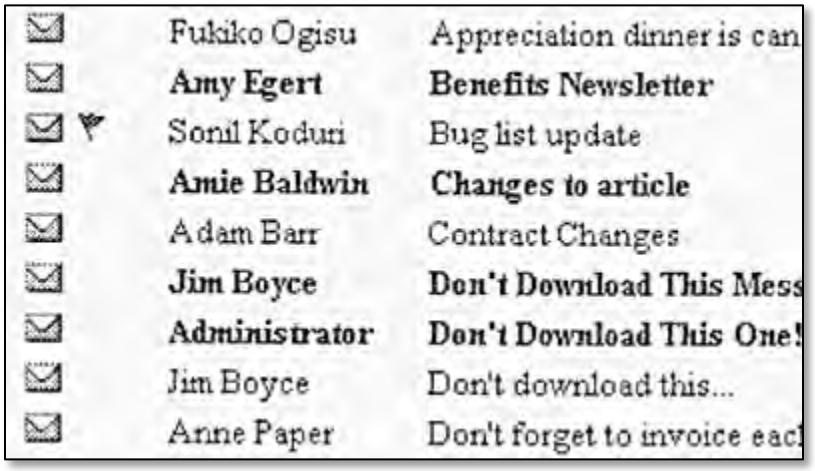


Figure 36-1. Using OWA, you can access your Inbox through a Web browser.

(Boyce, p.872.)



(Boyce, p.872 (excerpt of Figure 36-1).)

91. Boyce confirms that these users—Jim Boyce, Anne Paper, Amie Baldwin, and Fukiko Ogisu—are "**users of the system**." As shown in the figure

below, Jim Boyce, Anne Paper, Amie Baldwin, and Fukiko Ogisu are included in the system's "Global Address List," which Boyce explains "resides on the Exchange Server and presents the list of mailboxes on the server":

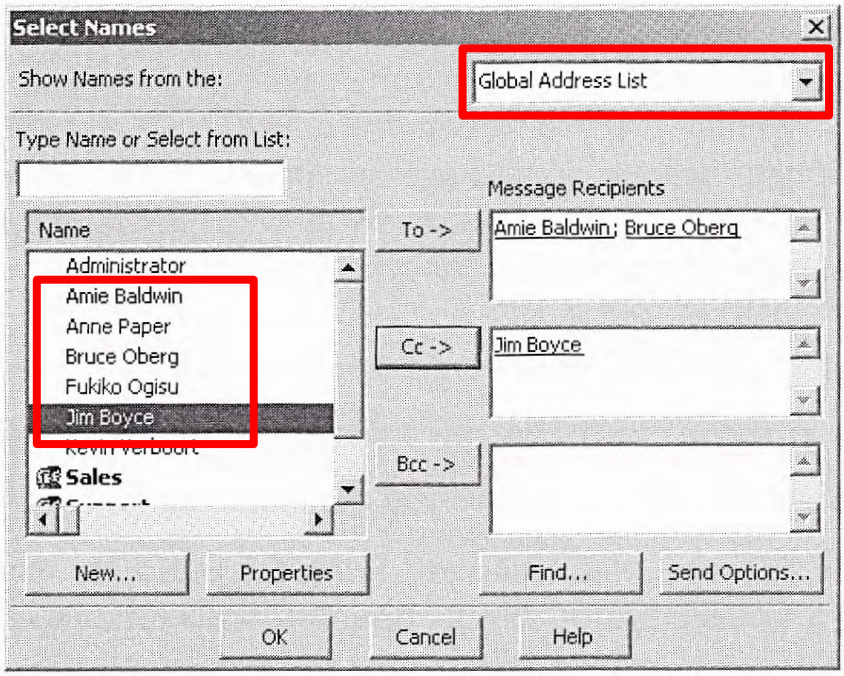


Figure 7-3. In the Select Names dialog box, you can select addresses from the address book.

(Boyce, p.176, p.123 (red boxes added).) Because these users have mailboxes on the server, they are each clearly users of the system. (Boyce, e.g., p.769 ("You add mailboxes in Windows 2000 with Exchange 2000 Server at the same time that you add the user account (they are essentially the same object in Active Directory) from the Active Directory Users And Computers tool." (underlining added)).)

"wherein one of the applications is a biography application having biographical information that is received from and that is about one of the users of the system"

92. As I explained above, the "**second configurable application**" corresponds in Boyce to the web page provided by Outlook Web Access for viewing and managing a user's contacts or, alternatively, viewing and managing a user's calendar. Both of these pages further qualify as the "biography application" as claimed.

93. In **Part III.C** above, I explained that the broadest reasonable construction of "biography application" is "application that provides biographical information" and, in turn, the broadest reasonable construction of "biographical information" is "information about a person or group of persons."

94. The contacts page qualifies as the claimed "**biography application**" because it includes content that provides information about a person. Boyce explains, for example, "[u]se the Contacts folder to manage contact information such as address, phone number, and fax number for your business associates and friends." (Boyce, p.382.) The example OWA contacts page below includes various pieces of information for each contact, including the contact's name, business address, business phone number, e-mail address:

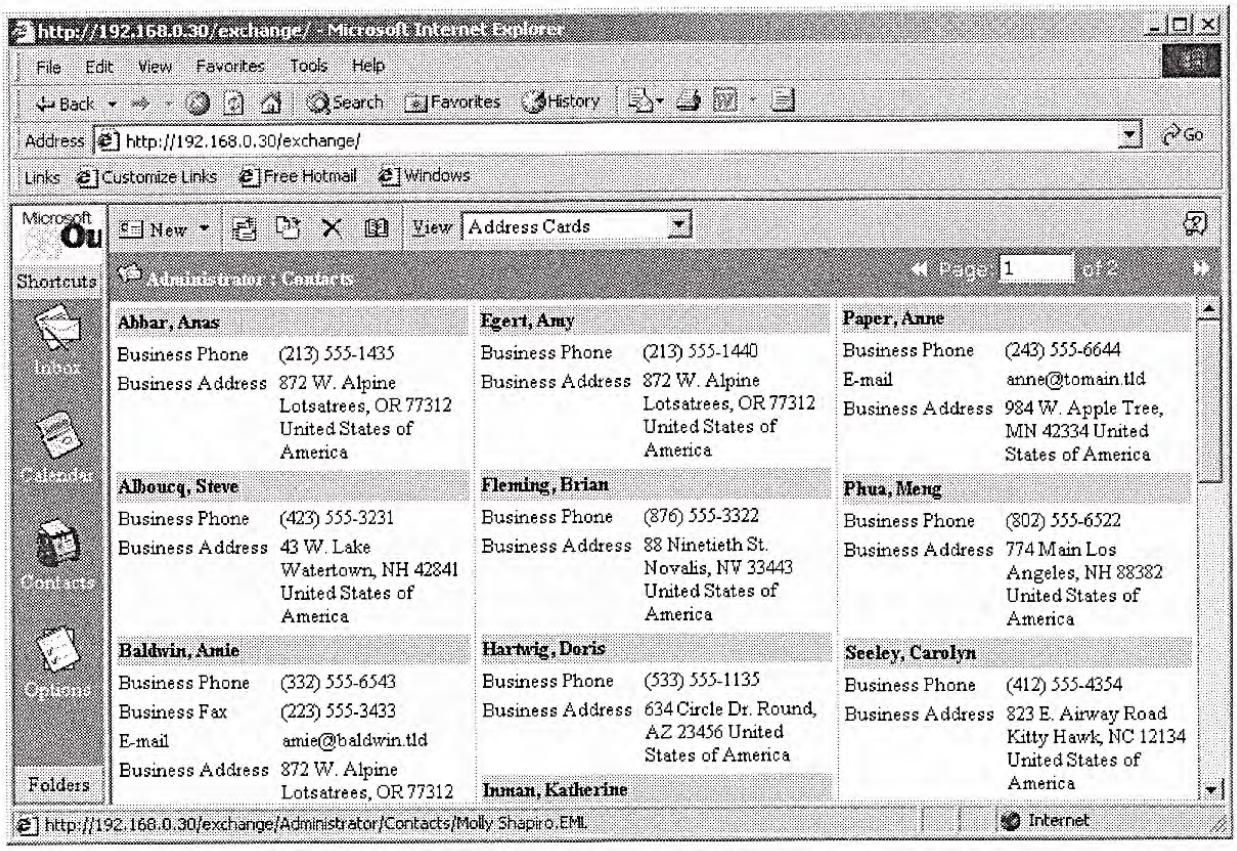


Figure 36-24. You can view and manage the Contacts folder in OWA.

(Boyce, p.898.)

95. In addition, Boyce discloses at least two ways that information is both "**received from**" and "**about**" "**one of the users the system**," as required by the claim. First, Boyce explains that a user who has received an e-mail message from another user can use information in that message to create a new contact:

> When you receive an e-mail message from someone you'd like to add to your contacts list, you can create a contact entry directly from the message. In the From box of the message form or on the InfoBar of the preview pane, right-click the name and choose Add To Contacts

> on the shortcut menu. Outlook opens a new contact form with the sender's name and e-mail address already entered. Add any other necessary data for the contact, and click Save And Close to create the entry.

(Boyce, p.386 (underlining added).) This feature provides an example in which the contacts page ("biography application") has "**biographical information that is received from and that is about one of the users of the system**," because the contacts page creates a new contact containing biographical information (e.g. name, email address) about another user of the system, from an email message received from that other user.

96. Therefore, it would have been obvious to a person of ordinary skill in the art that a contact for another user in the contacts page could have been created based on "biographical information that is received from and about one of the users of the system," as recited in the claim. It also would have been obvious to a person of ordinary skill in the art that the other user for whom the contact is created could be "**one of the users of the system**," as claimed. In fact, Boyce specifically discloses contacts who are **users of the system**. For example, as shown below, the contacts page for user Jim Boyce includes contact items for "Amie Baldwin" and "Anne Paper":

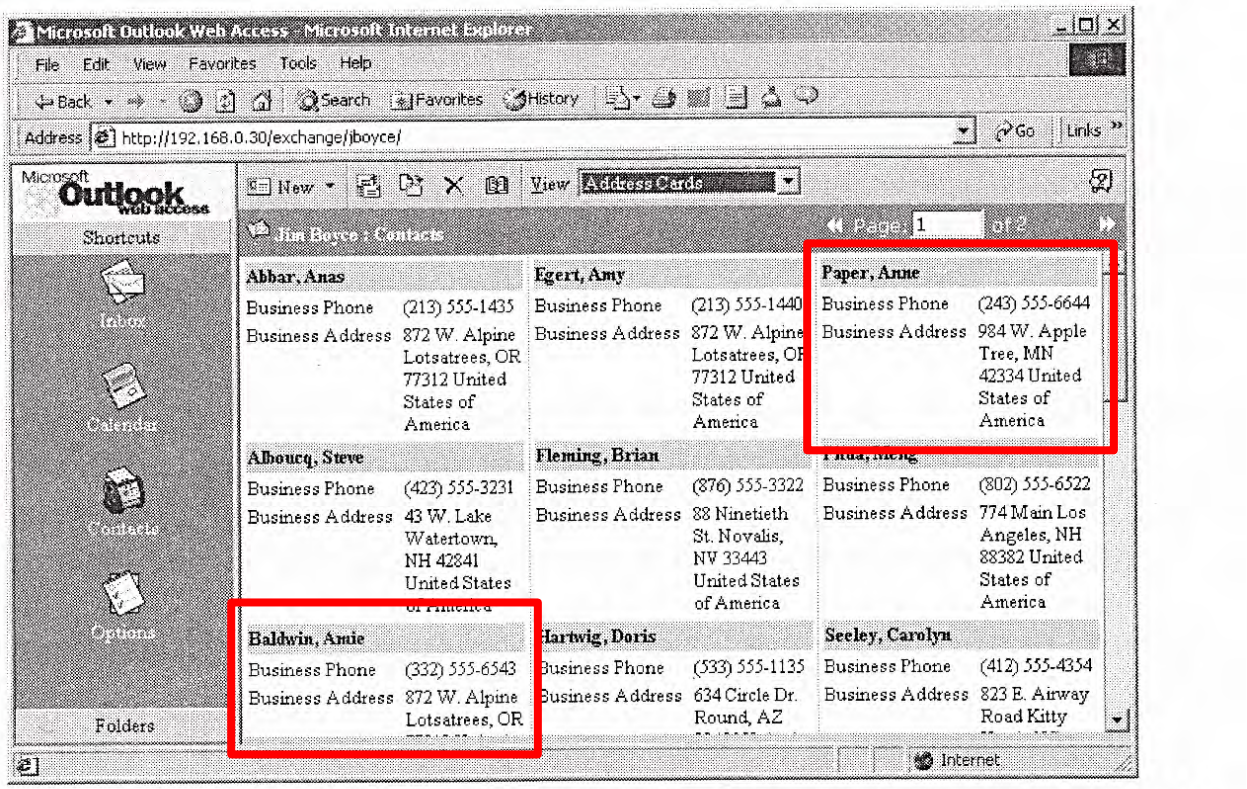
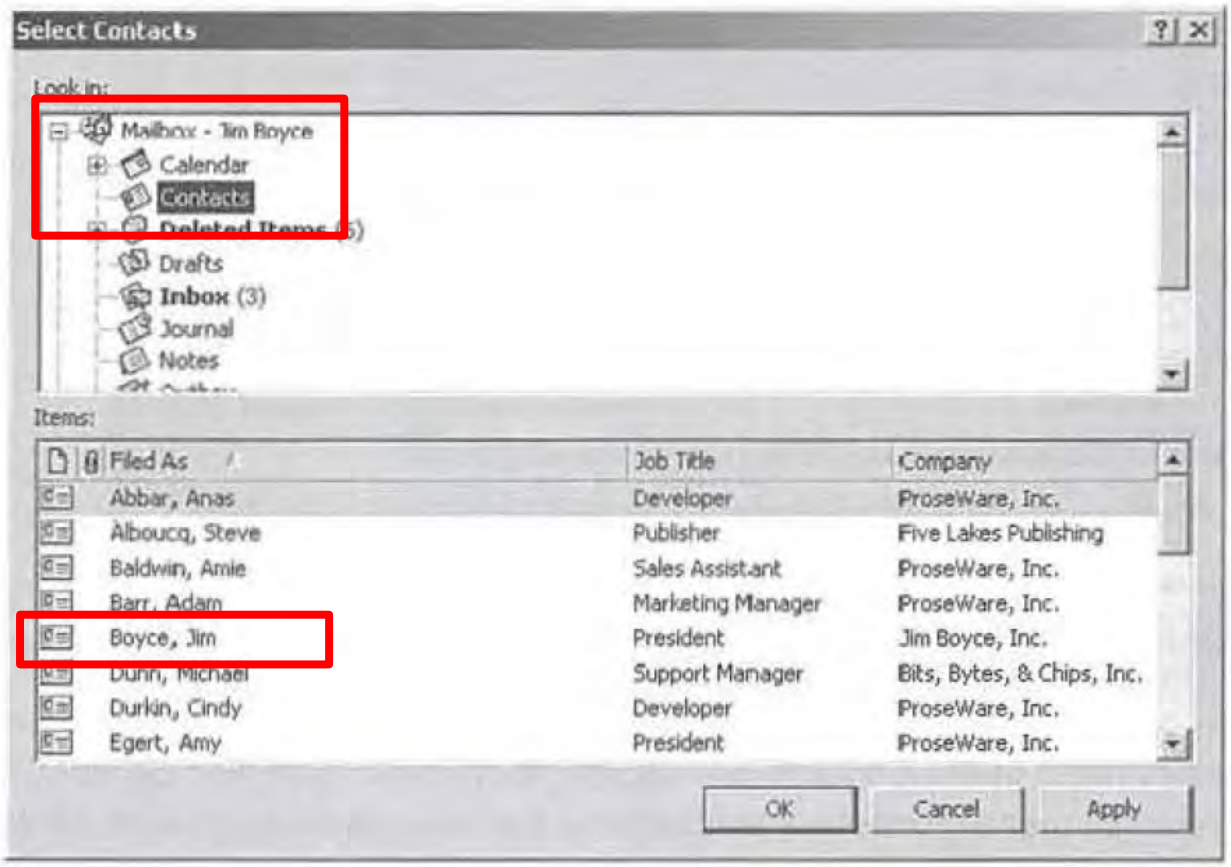


Figure 36-3. You can also work with your Contacts folder through OWA.

(Boyce, p.874 (red boxes added).) As explained above, Boyce discloses "Amie Baldwin" and "Anne Paper" as users of the system, at least because each has an associated Exchange mailbox. (Boyce, pp.123, 176 (Global Address List, which "presents the list of mailboxes on the server," listing "Amie Baldwin" and "Anne Paper").)

97. The second independent way that Boyce discloses biographical information that is both "**received from**" and "**about**" "**one of the users the system**" is by a user who provided contact information about themselves. For

example, as shown in the figure below, the mailbox for user Jim Boyce includes a Jim Boyce contact item:



(Boyce, p.389 (red boxes added).) Boyce provides exemplary interfaces for a user to modify the information about a contact saved in the system:

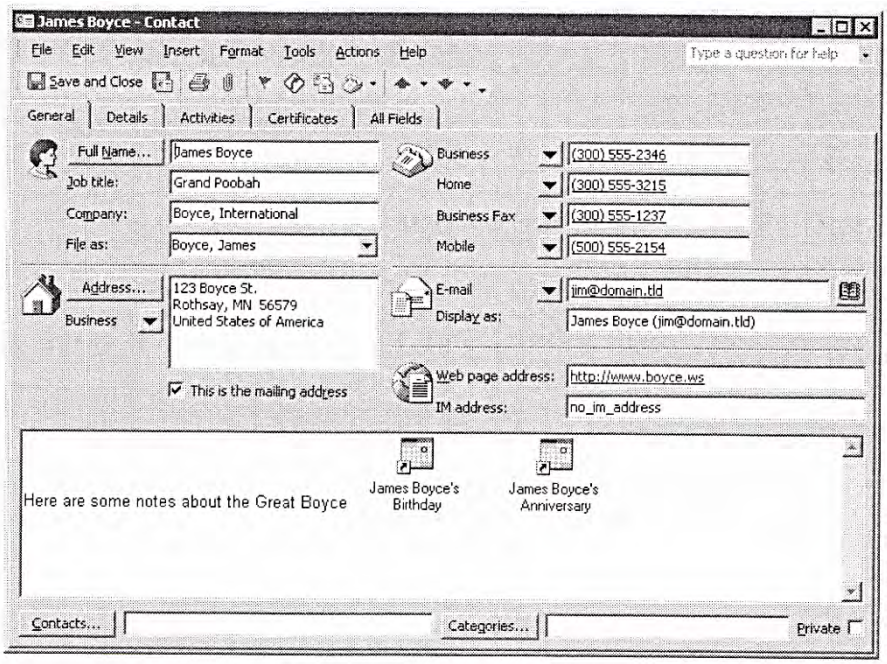


Figure 3-16. When you double-click a contact entry, you can view the contact form for that person.

(Boyce, p.74.) Boyce's discussion of Figure 3-16 explains that "[u]sing this form, you can view or make changes to the contact's data or perform other tasks . . . ." (Boyce, p. 74 (underlining added).)

98. Boyce therefore discloses that the contact information for a user, such as "James Boyce," could be based on "**biographical information that is received from and about one of the users of the system**," as recited in the claim. This occurs, for example, when James Boyce modifies the information about his own contact as shown in Figure 3-16 above. The contacts page (biography application) would then show the updated information about James Boyce, therefore disclosing and rendering obvious a biography application having biographical information

that is received from, and about, James Boyce. As noted above, "James Boyce" is "**one of the users of the system**." (Boyce, pp.123, 176.)

99. The calendar page separately qualifies as the claimed "**biography application**" because it includes content that provides information about a person, such as the calendar owner's availability at a particular date and time, as well as provides the location and activities of the calendar owner at a particular date and time. Also, since Boyce explains that a user can use both Outlook and OWA to create entries for their calendar, the information is both "**received from**" and "**about**" "**one of the users the system**," as required by the claim.

100. In particular, Boyce explains that a user can create three types of calendar items—"appointments," "events" and "meetings." An *appointment*, "involves only your schedule and time and does not require other attendees or resources." (Boyce, p.480.) An appointment becomes an *event* when it lasts longer than 24 hours. (*Id.*) An appointment becomes a *meeting* "when you invite other people, which requires coordinating their schedules, or when you must schedule resources." (*Id.*)

101. Boyce discloses that Outlook provides a graphical interface for a user to create a calendar item. In the figure below, a form is provided for a user to create an appointment. The appointment includes biographical information about

the user, including disclosing that the user will be at the "Doctor's Office" for an "Annual Physical" on Wednesday, December 27, 2000 from 10:00 AM until 11:00 AM.

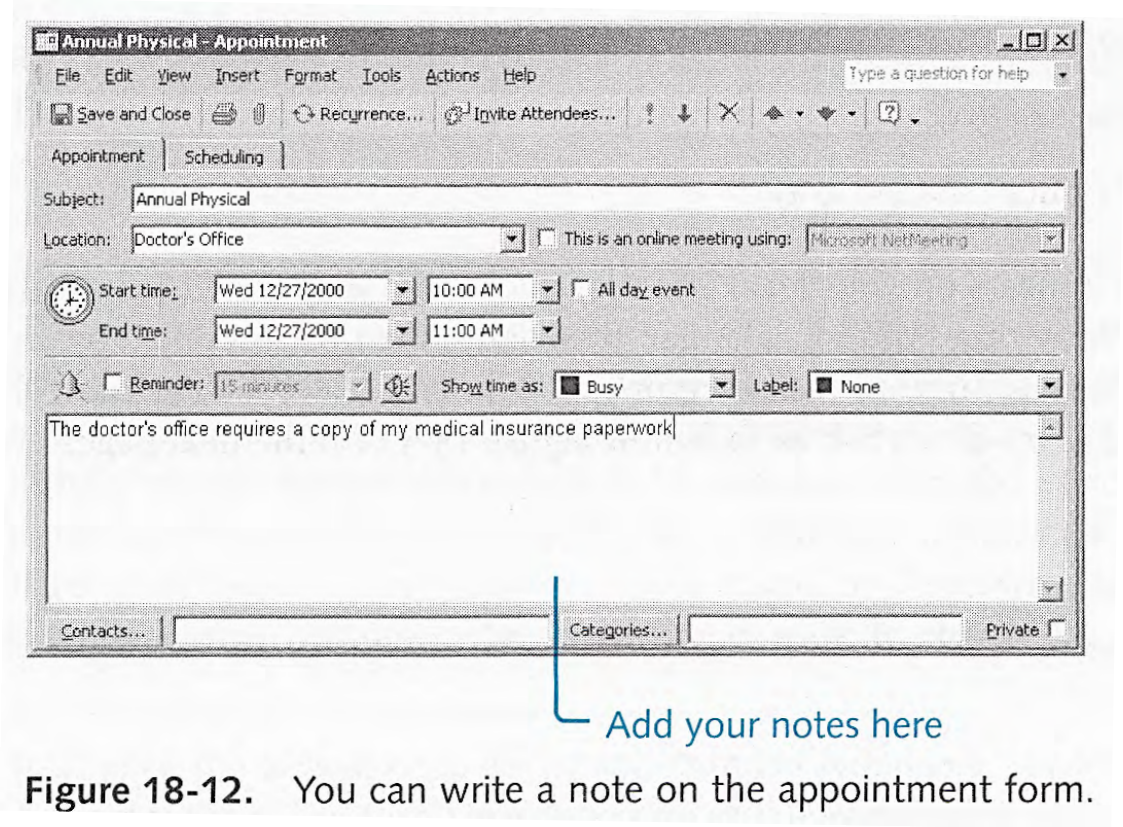


Figure 18-12. You can write a note on the appointment form.

(Boyce, p.490.)

102. Once a user completes the form, Boyce explains that "[y]ou can save an appointment in several ways. The most basic method is to click the Save And Close button on the toolbar of the appointment form. This saves the appointment to the Calendar folder and closes the appointment form." (Boyce, p.492 (underlining added).) Boyce makes clear that by saving the calendar item, it is

received from the user and stored by the system. (Boyce, p.785 (explaining that "[w]hen you create an Exchange Server account, Outlook defaults to storing your data in your Exchange Server mailbox" and that the data includes calendar information), p.790 ("Exchange Server stores e-mail messages (as well as other objects such as tasks and calendar items) in the mailbox store.").)

103. Boyce explains that a user can also create a calendar item using OWA. (Boyce, p.873 ("[Y]ou can also access your Calendar folder through OWA. You can view and modify existing items and create appointments.").) Boyce explains that the process for creating a calendar item using OWA is similar to using Outlook: "Click the New toolbar button to click the arrow beside New and choose Appointment to display an appointment form similar to the one in Outlook. Use the appointment form to specify the title, the time, and other properties for the appointment, just as you would in Outlook." (Boyce, pp.897-98.)

104. As I explained in my claim construction discussion above, the specification of the '720 patent states that the "**biography application**" "can" be "used to provide biographical information about persons and groups of persons involved in the organization sponsoring the web site." ('720, 13:2-4 (underlining added).) As I explained above, this reference to biographical information about people "involved in the organizing sponsoring the web site" describes a potential

use of the biography application, and is not a limitation of the term under its broadest reasonable construction. But even if a "biography application" required such a use, it would still be disclosed and rendered obvious by Boyce.

105. For example, Boyce makes clear that the Outlook/Exchange system, including the OWA web site, can be set up and used by an organization. Boyce explains, for example, that "[w]hether you're composing messages offline or creating tasks to assign to others, chances are good that you want to access your Exchange Server address book so that you can address messages to other users in your organization." (Boyce, p.864 (underlining added).) Regarding OWA, Boyce advises that "[a]s you begin planning how you will deploy and manage your Exchange Servers in light of OWA, keep the front-end-back-end topology requirements in mind. Decide which strategy . . . makes the most sense for your organization." (Boyce, p.878 (underlining added).) Therefore, Boyce discloses and makes obvious to a person of ordinary skill in the art that a user's OWA contacts and calendar pages would provide information about users "involved in the organization sponsoring the web site." Therefore, Boyce discloses this entire limitation.

(c) "generate an administrator portal through which users of the system are permitted to act in the role of an administrator of certain web pages, wherein a user acting in the role of an administrator may manage business rules that utilize profiles of the users of the system to control interaction of the users with the certain web pages, wherein each user of the system is permitted to act in the role of an administrator at least with respect to a subset of web pages on the web site" (Claim 7[a][2])

106. Boyce discloses this limitation. In light of the length of this claim limitation, I divide it into pieces to ensure that I cover all of its requirements.

"generate an administrator portal through which users of the system are permitted to act in the role of an administrator of certain web pages"

107. As I explained in **Part III.C** above, the broadest reasonable construction of "administrator portal" is "interface for managing applications and/or business rules of the system."

108. In Boyce, the "**administrator portal**" corresponds to windows and dialog boxes of Outlook that allow a user to manage delegation functionality. These windows and dialog boxes are generated by the Microsoft Outlook software. By managing delegation, a user acts as an administrator of web pages provided by OWA (including the user's inbox and calendar pages) by determining who can access the pages and particular content on those pages.

109. As I explained in **Part IV.A** above, using the "delegation" feature in Outlook, a particular user can specify various ways that other users may access that

particular user's account. (Boyce, pp.679-680.) Boyce explains that by using Outlook delegation features, "you can selectively restrict an assistant's access to your data." (Boyce, p.679.) For example, a delegate may be given read-only or editor access to another user's inbox, contacts or calendar. (Boyce, pp.681-682.)

110. Boyce discloses the process for managing delegation in detail, and in fact describes the process as using an "interface":

> You can add, remove, and configure delegates for all your Outlook folders through the same interface.
>
> Follow these steps to delegate access to one or more of your Outlook folders:
>
> 1. Choose Tools, Options to open the Options dialog box.
> 2. Click the delegates tab (see Figure 27.1)

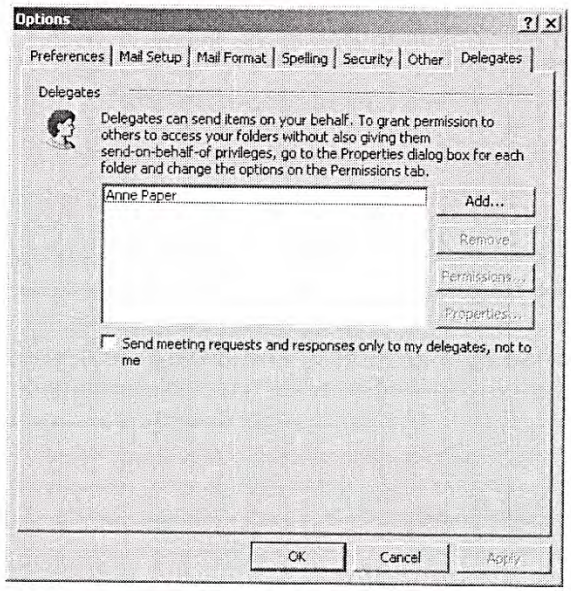


Figure 27-1. The Delegates tab shows the current delegates and lets you add, remove, and configure delegates.

3. Click Add to open the Add Users dialog box.

4. Select one or more users and click Add.

5. Click OK. Outlook displays the Delegate Permission dialog box (see Figure 27-2).

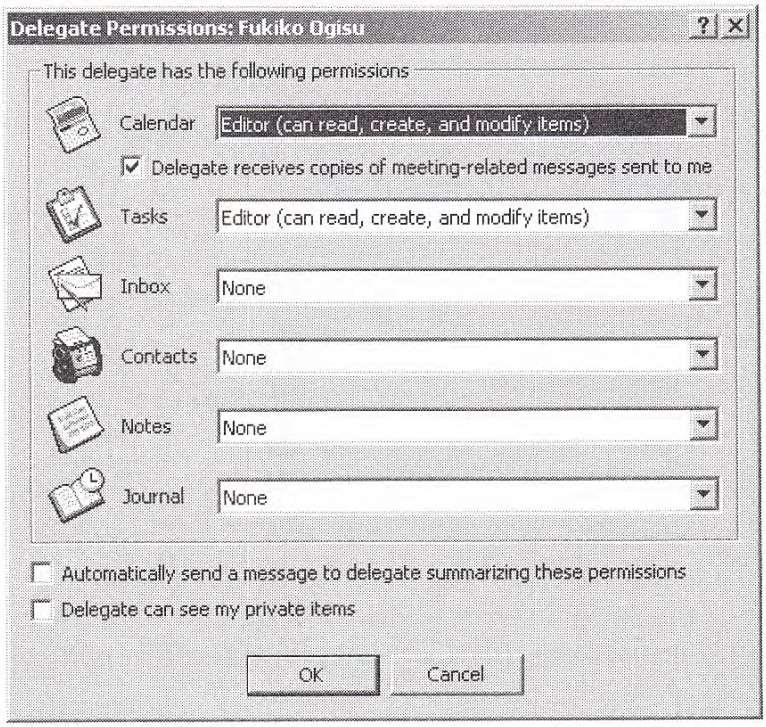


Figure 27-2. Configure delegate permissions in this dialog box.

6. For each folder, select the level of access you want to give the delegate based on the following list:

- **None**. The delegate has no access to the selected folder.
- **Reviewer**. The delegate can read existing items in the folder but can't add, delete, or modify items. Essentially, this level gives the delegate read-only permission for the folder.
- **Author**. The delegate can read existing items and create new ones but can't modify or delete items.
- **Editor**. The delegate can read existing items, create new ones, and modify existing ones, including deleting them.

(Boyce, pp.680-82 (underlining added).)

111. Boyce further discloses that the delegation feature includes an option for a user to specify whether the delegate can see the user's "private items":

(Boyce, p.553; *see also id.*, p.682 ("**Delegate Can See My Private Items.** Allows the delegate to view items you've marked as private. Clear this option to hide your private items.").) Messages, contacts and calendar items may be marked private. (Boyce, p.809 ("For example, you might let a delegate view your existing calendar items and create new ones but prevent the delegate from viewing items marked as private." (underlining added)), p.683 (describing delegate restrictions on a calendar), p.794 (describing "message sensitivity" and explaining that "[y]ou can set one of four levels of sensitivity—Normal, Personal, Private, or Confidential."), p.179 (describing message sensitivity), p.383 (Figure 14-2 showing "Private" checkbox in lower right corner of window displaying contact information), p.74 (Figure 3-16, "Private" checkbox for contact information), p.9 (Figure 1-5, "Private" checkbox for contact information).)

112. Boyce also discloses that the interface to manage access to a user's account also includes the ability to control whether a delegate has "Folder Visible" privileges for a folder, such as the inbox, contacts or calendar. (Boyce, p.684.) A user who has "Folder Visible" privileges for a folder "can see the folder." (Boyce, p.687.) The interface is depicted in the figures below, which show the privileges that user "Beth Silverberg" has for an Inbox folder:

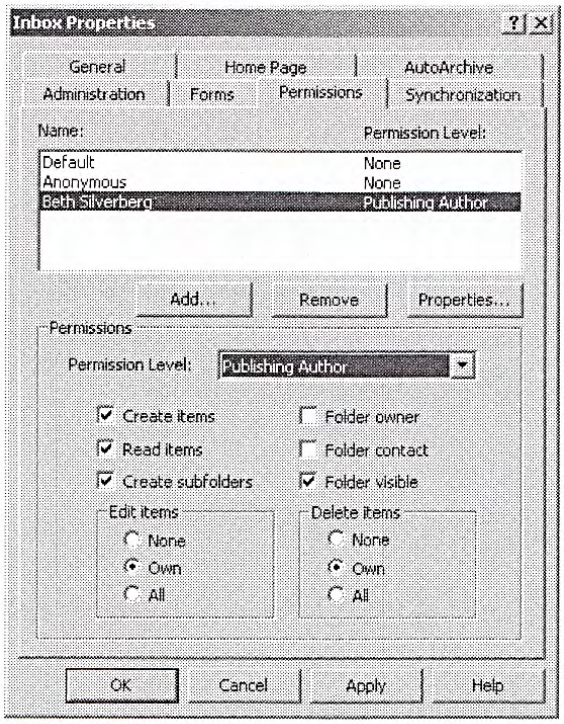
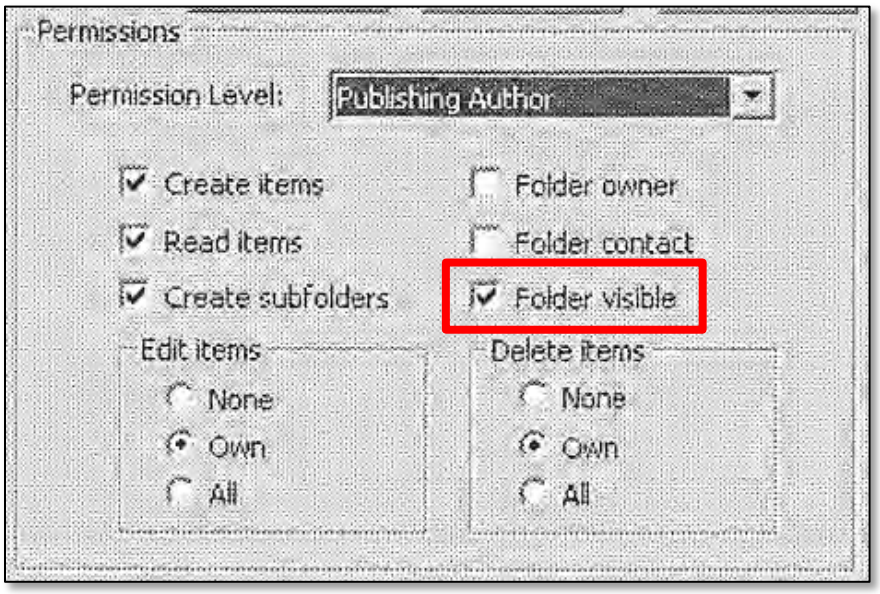


Figure 27-5. Use the Permissions tab to configure access permissions for the folder.

(Boyce, p.687.)



(Boyce, p.687 (excerpt of Figure 27-5; red box added).)

113. The delegation interface shown and described above is clearly an interface for "**managing applications and/or business rules of the system**" in accordance with the broadest reasonable construction of "administrator portal." As noted above, using delegation, a particular user can manage an application, such as the particular user's inbox, contacts or calendar pages and associated content, by specifying which other users may also interact with those pages, and how. Moreover, delegation information itself that is managed using the delegation interface qualifies as business rules of the system. As I explained above, the broadest reasonable construction of "business rule" is "rule incorporated into the system that controls how the system functions." Delegation information controls

how the system functions by controlling how users access and interact with the system.

114. Therefore, Boyce discloses that the delegation interface qualifies as an "**administrator portal**." Boyce further teaches that, using the delegation interface, a user "**act[s] in the role of an administrator of certain web pages**."

115. In particular, Boyce also indicates that delegation functionality is incorporated into Outlook Web Access (OWA), which as explained below, comprises web pages. These web pages include the inbox, contacts, and calendar applications. For example, describing how to access OWA, Boyce explains that "[e]xplicit logon is useful when you need to access a mailbox you don't own but for which you have access permission." (Boyce, e.g., p.878.) This description of a user who does not own a mailbox but has access permission matches Boyce's description of a delegate. (Boyce, e.g., p.682 ("For each folder, select the level of access that you want to give the delegate.").)

116. Although Boyce does not appear to expressly state that the "delegate" functionality is incorporated into OWA, it would have been obvious to a person of ordinary skill in the art that the rules applicable to delegates should apply regardless of the manner of access of the mailbox. A person of ordinary skill in the art would have understood that the rules governing access for delegates should be

consistently enforced regardless of whether a user's mailbox is accessed through a client application or though OWA. Boyce explains that the ability to access another user's mailbox was already present in OWA. Providing that ability in accordance with delegation information would have involved the combination of existing elements according to their established functionality with the predictable result of a user's delegates being able to access the user's mailbox, in accordance with the restrictions established by the mailbox owner. Moreover, Boyce discloses express motivations for having delegation functionality in OWA. Boyce explains that OWA "is useful for roaming users who want to access the most common mailbox features when they don't have access to their personal Outlook installation." (Boyce, p.872.) A person of ordinary skill in the art would have been motivated to include delegation functionality in OWA so that a delegate who was a "roaming user" could perform their assigned responsibilities. Boyce further states that "OWA can save the administrative overhead, support, and licensing costs associated with Outlook to users who don't need all that Outlook has to offer." (Boyce, p.872.) Therefore, a person of ordinary skill in the art would have also been motivated to include delegation functionality in OWA so that a delegate who did not need all of the features of Outlook could still perform their assigned delegation duties.

117. Boyce also teaches that the inbox, contacts and calendar pages of OWA are "**web pages**." Boyce describes the display of a user's inbox in a web browser as a "page." (Boyce, p.890 ("[W]hen you connect to your mailbox, you should see a page similar to the one shown in Figure 36-15 for Exchange 2000 Server or Figure 36-16 for Exchange Server 5.5" (underlining added)); *see also id.*, p.900 (Figure 36-26 identifying right-pane area as a "page").) Boyce further explains that "[t]o access your mailbox through OWA, you can use any Web browser that supports JavaScript and HTML version 3.2 or later" and that HTML "is the protocol used most commonly to define and transmit Web pages." (Boyce, p.874, p.22 (underlining added); *see also id.*, p.875 ("OWA in Exchange 2000 Server relies on HTML and DHTML rather than ASP" (underlining added)), p.874 (explaining that DHTML is short for "Dynamic HTML").)

118. Accordingly, a user using the delegation interface "**acts in the role of an administrator**" of OWA **web pages** because, as explained above, the interface allows the user to specify rules regarding whether and how other users can access and interact with those web pages.

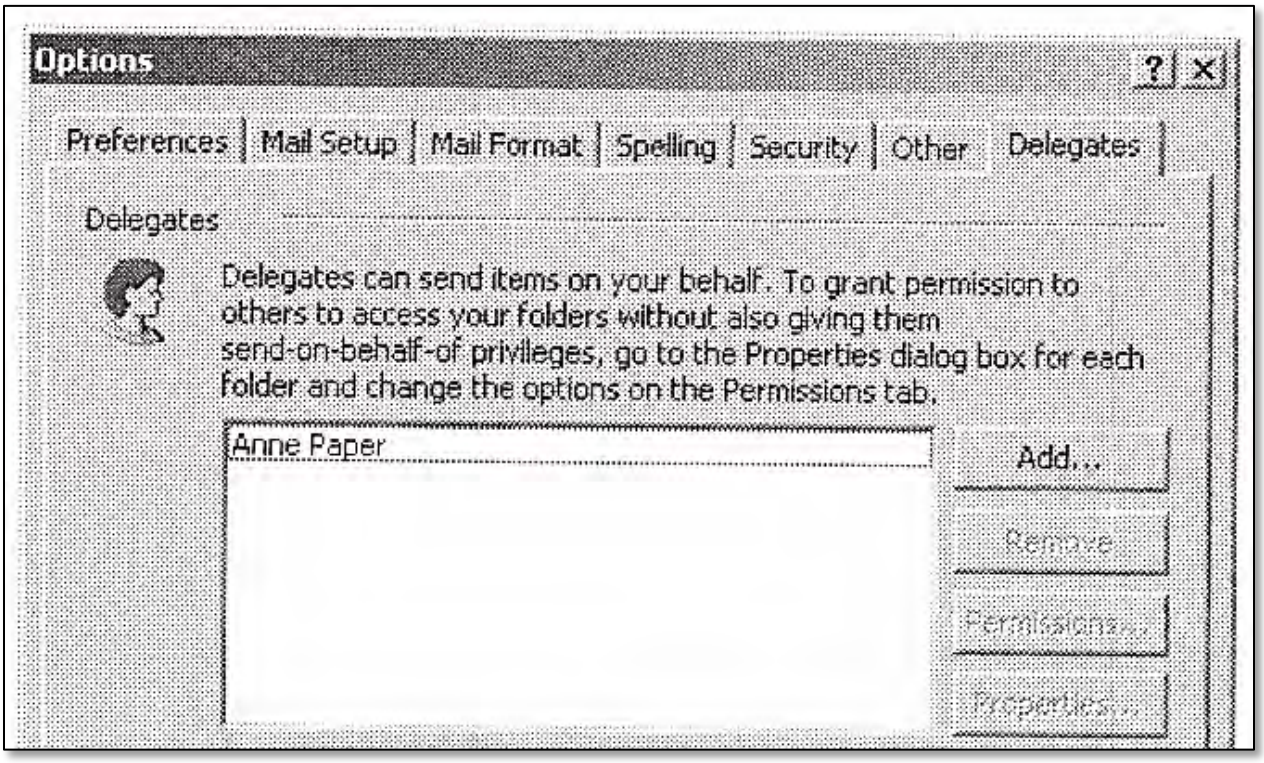
"wherein a user acting in the role of an administrator may manage business rules that utilize profiles of the users of the system to control interaction of the users with the certain web pages"

119. I generally explained how Boyce discloses this limitation in my discussion of the previous limitation. Briefly, using the delegation interface, a user can manage delegation rules specifying whether and how other users may access that user's mailbox. Boyce discloses and makes obvious that these delegation rules control user interaction with web pages of OWA.

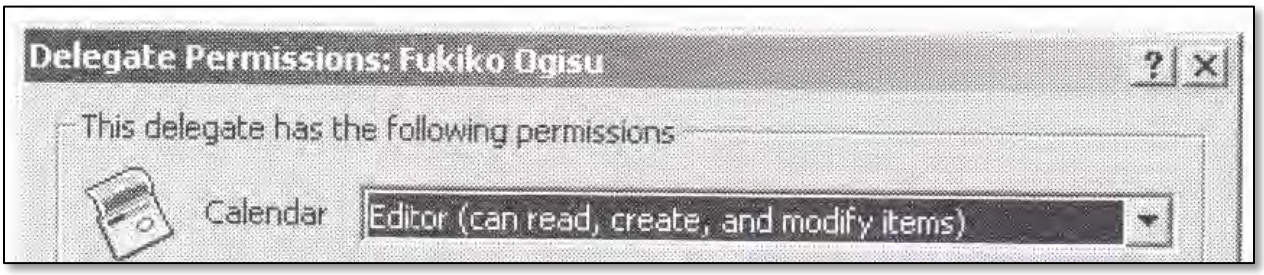
120. Boyce further discloses that the delegation rules "**utilize profiles of the users of the system**" in order to carry out the delegation feature. As I explained above, the term "profile" under its broadest reasonable construction means "information comprising attributes relating to a user of the system."

121. I note that the claim limitation refers to profiles of user**s**, plural. Boyce teaches that a user may have multiple delegates. (Boyce, p.680 ("You can assign multiple delegates so that more than one individual can access your data with send-on-behalf-of-privileges."), p.681 (describing process for adding delegates, "Select one or more users and click Add.").) In fact, Boyce teaches than a user can configure delegate access for all of the members of a distribution list, such as all members of a sales department. (Boyce, pp.685-66.)

122. For each delegate, delegation rules use attributes about that delegate. Boyce discloses examples of the delegation interface in which attributes about a user have been specified in order to identify that user as a delegate. For example, as shown below, Boyce discloses that a user selects a name of a delegate, in this case "Anne Paper":



(Boyce, p.681.) Boyce also identifies a user named "Fukiko Ogisu" as another delegate:



(Boyce, p.681.) Boyce then discloses an interface for specifying the rules that govern Mr. Ogisu's access to the user's mailbox:

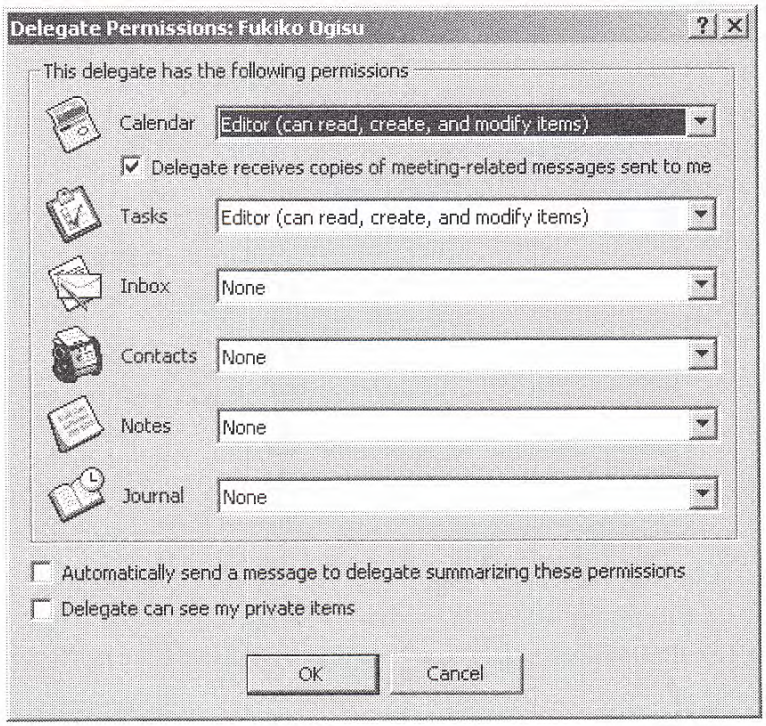


Figure 27-2. Configure delegate permissions in this dialog box.

(Boyce, p.681.)

123. Boyce therefore discloses and renders obvious that "**an administrator may manage business rules that utilize profiles of the users of the system to control interaction of the users with the certain web pages**." As shown in

Figure 27-2 above, the administrator can manage the delegation rules (business rules) that utilize profiles of the users of the system, for example, by identifying the delegate as Fukiko Ogisu to whom the rules apply. This feature also allows the administrator "**to control interaction of the users with the certain web pages**," as recited in the claim, because it allows the administrator to specify the delegate's access to the inbox, contacts, and calendar applications. As noted above, these are web pages in OWA.

124. Finally, the delegates to whom the business rules apply are "**users of the system**." As already discussed, Boyce discloses that delegates, among other things, can read and send email and create calendar items—i.e., use the system. (Boyce, e.g., p.679.) In fact, Boyce confirms that Anne Paper and Fukiko Ogisu in particular are users of the system. As shown in the figure below, Anne Paper and Fukiko Ogisu are included in the system's "Global Address List," which Boyce explains "resides on the Exchange Server and presents the list of mailboxes on the server":

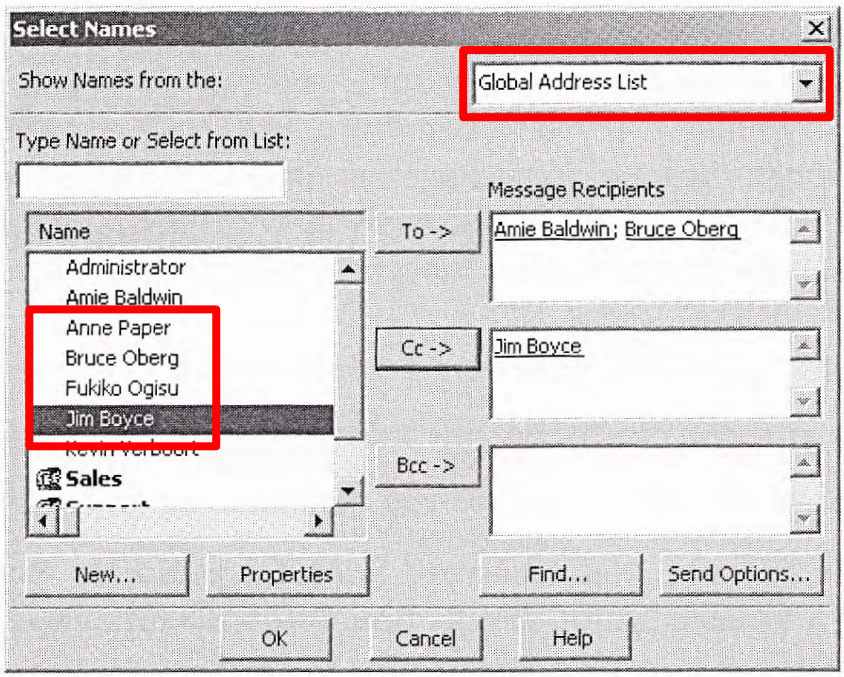


Figure 7-3. In the Select Names dialog box, you can select addresses from the address book.

(Boyce, p.176, p.123 (red boxes added); *see also id.*, p.769 ("You add mailboxes in Windows 2000 with Exchange 2000 Server at the same time that you add the user account (they are essentially the same object in Active Directory) from the Active Directory Users And Computers tool." (underlining added)).)

125. In addition, as shown in the figures below, the inbox for Jim Boyce includes messages from Anne Paper and Fukiko Ogisu:

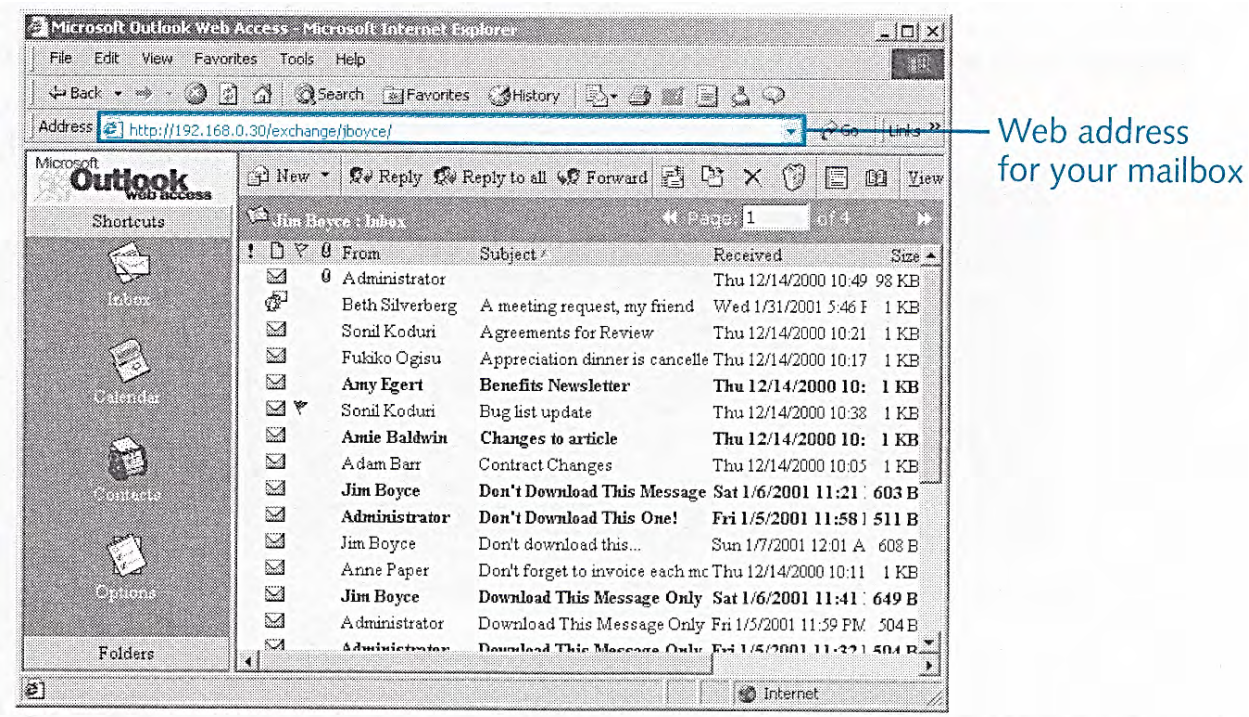
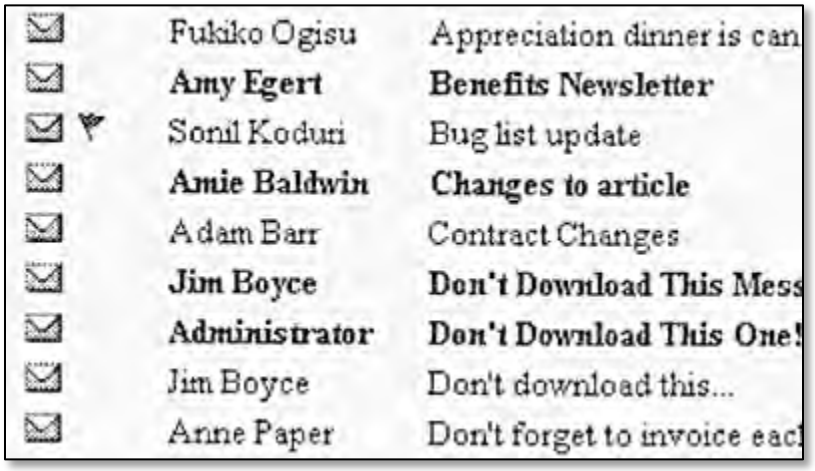


Figure 36-1. Using OWA, you can access your Inbox through a Web browser.

(Boyce, p.872.)



(Boyce, p.872 (excerpt of Figure 36-1).)

"wherein each user of the system is permitted to act in the role of an administrator at least with respect to a subset of web pages on the web site"

126. As I explained above, a user of the OWA software acts in the role of an administrator at least when the user manages their delegates using the delegation interface. Boyce suggests that the delegation interface is available to the other users of the system. Boyce explains that if a user cannot assign delegate permissions, this is likely a problem resulting from an improper configuration. (Boyce, p.683 ("If the Permissions button appears dimmed or you are unable to assign delegate permissions for some reason, the problem could be that you have designated a local PST as the default delivery location for your profile. Make sure you configure your profile to deliver mail to your Exchange Server mailbox instead.").) A person of ordinary skill in the art would have interpreted Boyce as allowing "**each user of the system**" to use the delegation feature.

127. Moreover, it would have been obvious to a person of ordinary skill in the art to provide the delegation feature to each user of the system. Providing the delegation interface to each user of the system would have entailed making available to all users a useful existing feature that was already available to at least a subset of users. Doing so would have also improved the system, with each user benefiting from the ability to specify other users to serve as delegates as needed. In fact, Boyce makes clear that delegation is not intended solely for a user to

manage an assistant's or subordinate's access to the user's data, but that a user's supervisor may also be a delegate. (Boyce, p.680 ("You might have an assistant who manages your schedule and therefore has delegate access to your calendar and another delegate—your supervisor—who manages other aspects of your work day and therefore has access to your Tasks folder.").) A person of ordinary skill in the art would therefore have been motivated to provide the delegation feature to allow each user to work more efficiently with other users. Furthermore, a person of ordinary skill in the art would have perceived no technical obstacle in providing an existing feature to all users that was already available to at least some users. Boyce therefore discloses and renders obvious this limitation.

(d) "generate at least one configurable link that points to at least one of the configurable applications, wherein the configurable link is based on information concerning a profile of at least one user of the system and a rule that is configurable by a user acting in the role of an administrator and that relates to which of the users of the system are permitted to view content of the configurable application to which the configurable link points" (Claim 7[a][3])

128. Boyce, alone or in combination with Parker, discloses this limitation. In light of the length of this claim limitation, I divide it into pieces to ensure that I cover all of its requirements.

"generate at least one configurable link that points to at least one of the configurable applications"

129. Boyce discloses this first portion of claim 7[a][3]. As I explained above in **Part III.C,** the broadest reasonable construction of "link" is "mechanism to activate an application on a network site" and the broadest reasonable construction of "configurable link" is "link that can be modified or configured as permitted by any relevant business rules."

130. The "**link**" in Boyce corresponds to clickable icons and associated functionality shown in a left pane ("Outlook Bar") of the display below:

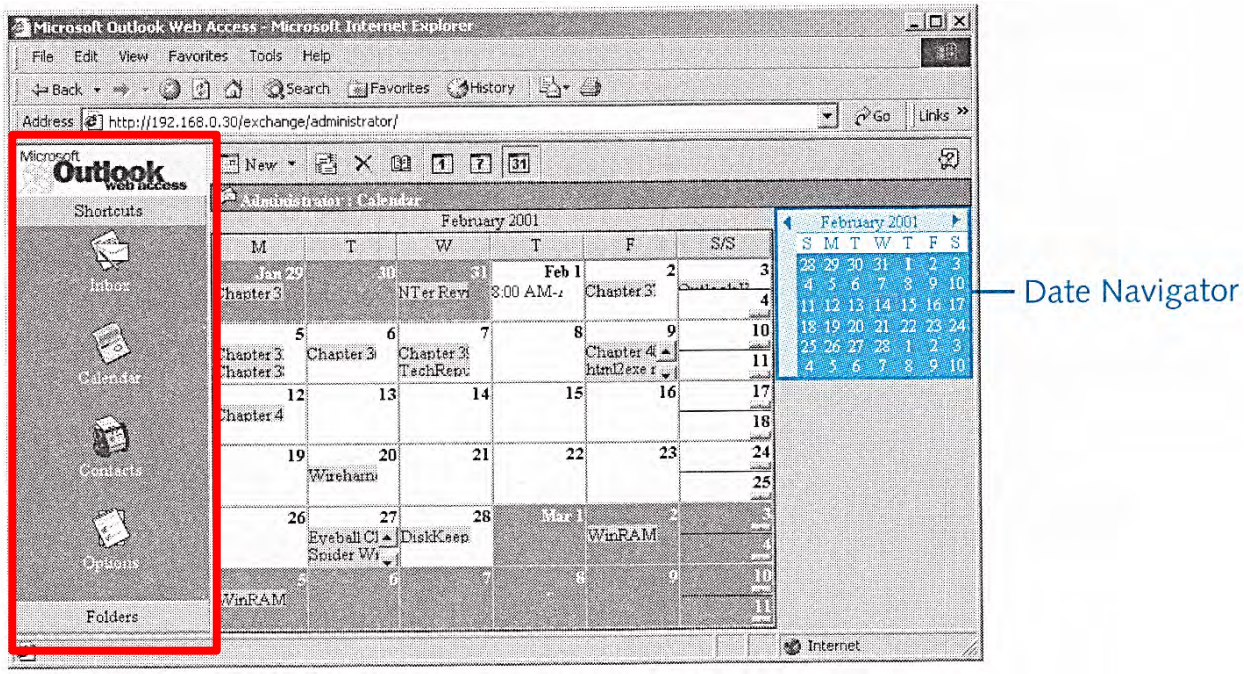


Figure 36-23. You can view and modify your schedule in OWA.

(Boyce, p.897 (red box added).) As shown at right, the "Outlook Bar" includes icons for a user's Inbox, Contacts and Calendar. Boyce discloses that a user may navigate among OWA pages by clicking these icons. "When you select a different folder on the Outlook Bar," Boyce explains, "OWA displays the contents of the selected folder in the right pane." (Boyce, p.896.) Thus, for example, "[t]o manage your schedule, click the Calendar icon on the Outlook Bar. OWA updates the right pane to display your Calendar folder." (Boyce, p.897.) By clicking on an icon, the user "**activates**" the associated page ("**application**") to view it on the OWA web site ("**network site**").

131. For these reasons, Boyce teaches that these clickable icons ("**links**") "**point to at least one of the configurable applications**." As I explained above, the page for a user's inbox corresponds to the "first configurable application," while the contacts page or, alternatively, the calendar page corresponds to the "second configurable application." Boyce discloses that the clickable icons identify their associated pages (e.g., "Inbox") and cause those pages to be loaded for display, thereby disclosing that each icon "**points**" to its respective configurable application.

132. Boyce further discloses that the clickable icons ("**links**") are "**configurable**," at least because Boyce teaches that their display to a delegate depends on the delegate's privileges, which are configurable by the mailbox owner as permitted by the OWA software (i.e., "any relevant business rules").[1] As I explained above for claim 7[a][2], Boyce discloses and makes obvious that delegation functionality is incorporated into Outlook Web Access. (Boyce, e.g., p.878.)

133. Boyce further teaches that the link is "configurable" in that the administrator can configure whether the clickable icon is visible or not visible to a particular delegate, as permitted by the OWA software. Boyce explains that each of the clickable icons on the Outlook Pane (e.g., Inbox, Contacts, Calendar) refers to a *folder* in Outlook. This is shown in Figure 36-21, which shows an alternative display in which the Inbox, Contacts, and Calendar features are shown in a list of "Folders:"

[1] Boyce explains mailbox owners are permitted to configure delegate permissions in accordance with the permission levels provided by the system, but only when the system uses Microsoft Exchange Server and the Delegates add-in is installed. (Boyce, pp.552 (Exchange Server and Delegate add-in requirements); 682, 687-688 (system-provided permission levels).)

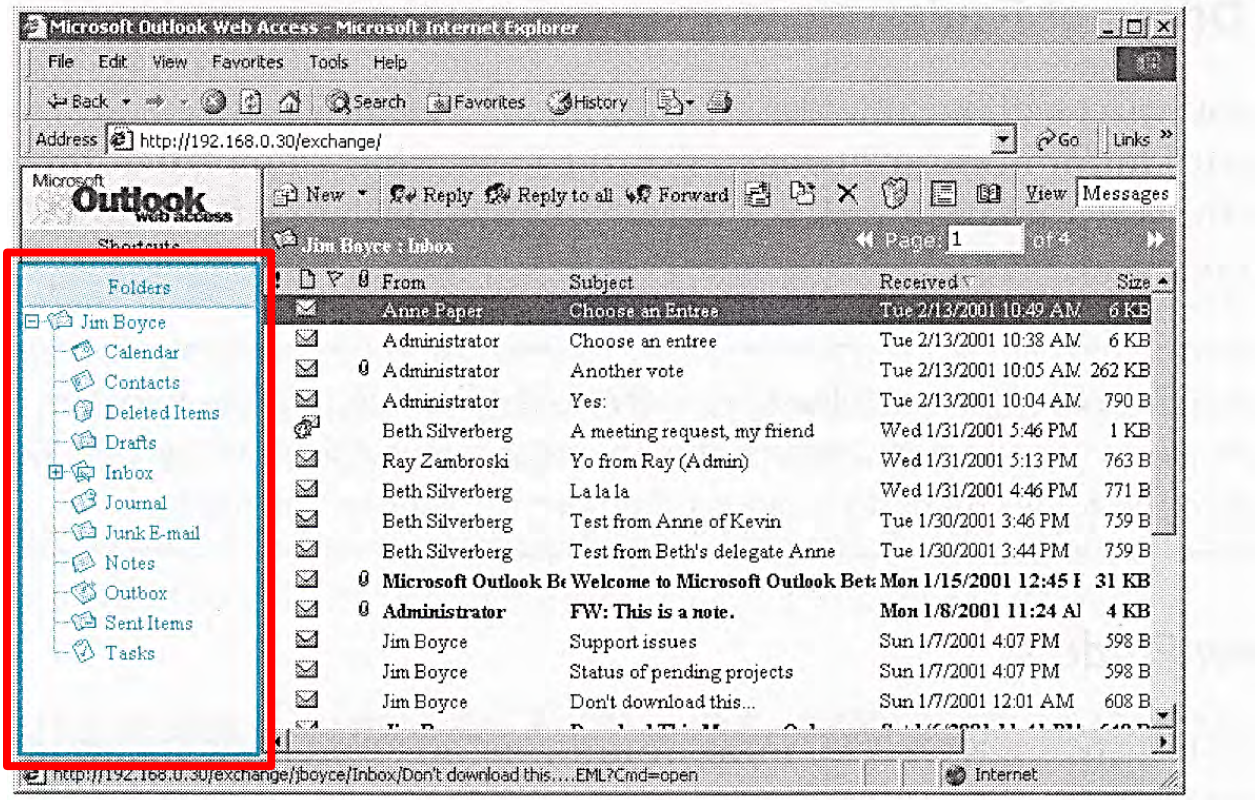


Figure 36-21. Drag messages to the folder list to copy or move them.

(Boyce, p.895 (red box added); *see also id.*, p.894 ("Click the Folders button in the left pane to open the folder list (as shown in Figure 36-21).").) Thus, while the particular icons I have identified are shown under a "Shortcuts" area, Boyce makes clear that these icons are folders, just like those in the alternative "Folders" area that provides a more comprehensive list of folders for a user.

134. Boyce further explains that a delegate may or may not have "Folder Visible" privileges for a particular folder. (Boyce, p.684.) A user who has "Folder Visible" privileges for a folder "can see the folder." (Boyce, p.687.) Boyce further shows a user interface in which an administrator can explicitly remove the

"Folder Visible" privilege of a user for a particular folder. (Boyce, p.688 (Fig, 27-5).) Therefore, Boyce fully discloses and suggests the claimed "at least one configurable link" in the form of a clickable icon whose display depends on the privileges associated with the user accessing the OWA display.

135. To the extent that there is any question that Boyce alone fully discloses and suggests that the clickable icons in the left pane are modified visually in accordance with the accessing user's permissions, this feature would have been obvious in view of **Parker**.

Combination with Parker

136. As discussed in **Part IV.A.2** above, Parker discloses a series of user interface techniques to display the privileges of individual users to access what Parker calls a server "sharepoint," which is defined in Parker as "an item, e.g., a file, a folder, a volume, a hard disk, or the like, that is capable of being shared by the network users." (Parker, 2:24-26.)

137. Parker explains that folders (or other "sharepoints") may be displayed to a particular user in a way that visually indicates the access privileges granted to that user. This is shown in the user interface of Figure 7, which shows a file directory listing exactly as it would be seen by a user of the system named "User C":

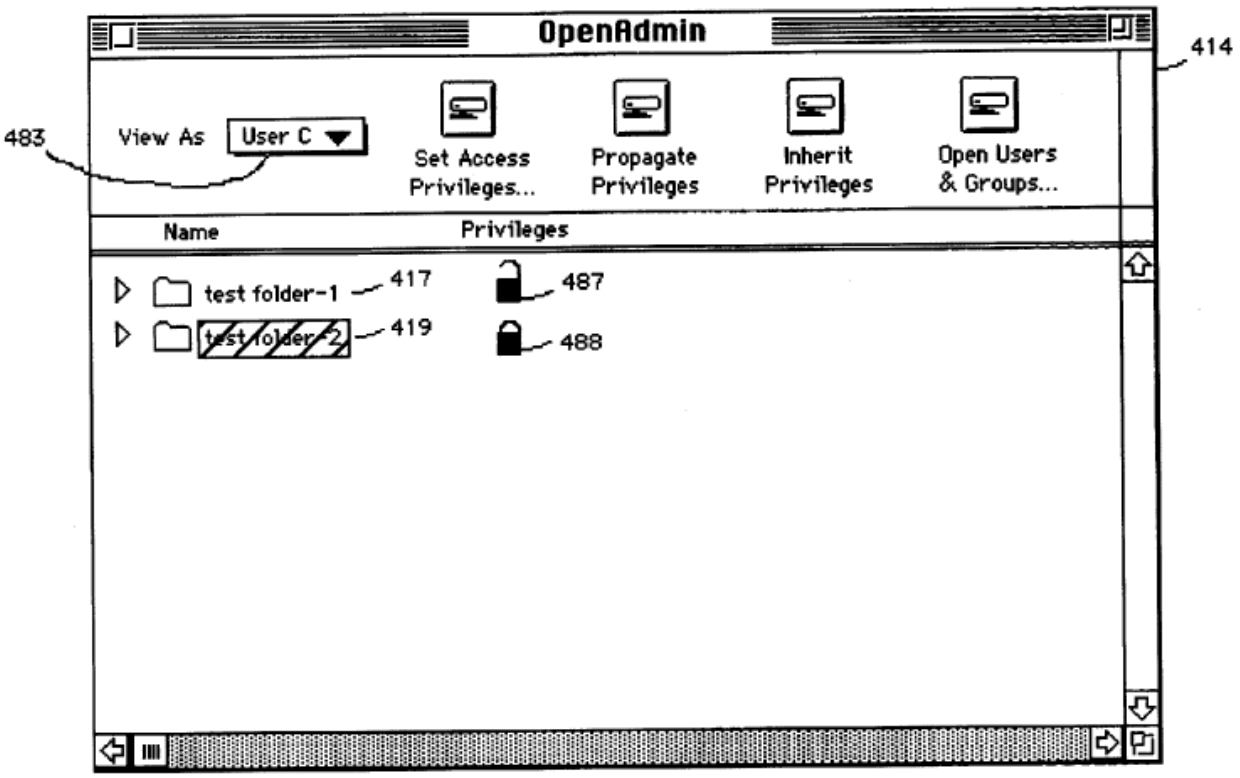


FIG. 7

(Parker, Fig. 7.)

138. Parker explains that the display in Figure 7 shows precisely how "User C" would see the two folders (**417**, **419**) on its screen. (Parker, 11:32-35 ("When the administrator views as user C, the administrator is viewing from user C's perspective (i.e., in accordance with user C's access privileges as if the administrator was sitting at user C's client terminal).").) In the example above, because the administrator did not grant "User C" rights to "test folder-2" (**488**), that folder will appear grayed out or with a lock icon. Parker explains that there are various ways that a user's privileges can be indicated visually:

> Since the administrator granted user C read access privileges to test folder-1 (**417**) in FIG. 5, test folder-1 (**417**) is shown to be accessible in FIG. 7 (by open lock icon 487 and by the fact that "test folder-1" is not ghosted, grayed out, or hidden). On the other hand, test folder-2 (**419**) is in a ghosted state indicating no access to test folder-2. In other embodiments, test folder-2 (**419**) may be grayed out, shaded, or hidden altogether. The indication of no access to test folder-2 is consistent with the administrator setting of user C's access to "None" in FIG. 6.

(Parker, 11:40-49 (underlining added).)

> In one embodiment, it is envisioned that a user accessing the network via its user privilege, will be able to distinguish whether the listed sharepoints are inaccessible, or accessible for read & write, read-only or write only via various access indicating icons. For illustration purposes, an open or closed lock icon will denote respectively user access privilege granted or no user access privilege. The open lock icon **487** is shown associated with sharepoint test folder-1 indicating access privilege for user C for this item. The closed lock icon **488** is shown associated with sharepoint test folder-2 indicating no access privileges. Alternative embodiments may include, but are not limited to, a set of "eye glasses" indicating read privileges, a "lock and key" indicating no access and a "writing instrument" indicating write privileges.

(Parker, 11:50-64 (underlining added).)

139. **Rationale to Combine Boyce and Parker** – It would have been obvious to a person of ordinary skill in the art to adapt the user interface techniques of Parker to Boyce. This would have predictably resulted in the Outlook Web Access system of Boyce with the additional ability to adapt the display of the clickable icons for each delegate, based on the permissions granted to the delegate. This could have resulted, for example, in a delegate seeing an accompanying icon from Parker (such as a "lock and key," "writing instrument," or "eye glasses") reflecting the delegate's access permissions. A person of ordinary skill in the art would have understood that Parker's user interface techniques could have been adapted to a system that similarly displays information in folders, such as Boyce.

140. Boyce and Parker both disclose similar systems for organizing and displaying folders in a networked environment that might have access restrictions attached to them, such as whether a user has permission to view and/or write to a particular folder. (Boyce, pp.679-689 (discussing delegation); Parker, 1:19-28.) Both references employ a similar user interface for granting access permissions to particular users, and both describe similar user interfaces for displaying folders in list or icon form on the user's screen. (Boyce, p.681 (Figure 27-2), p.688 (Figure 27-5), p.891 (Figures 36-15, 36-16), p.895 (Figure 36-21); Parker, Fig. 7 (487, 488).) It would have been obvious to one of ordinary skill in the art to add, to the

OWA web-browser display of Boyce, the user interface technique of Parker in which an item is displayed as "in a ghosted state," "grayed out, shaded, or hidden altogether" or otherwise (Parker, e.g., 11:44-47), depending on the user's access privileges. As noted above, this would predictably result in the OWA system of Boyce in which the clickable icons for accessing a user's inbox, contacts and calendar were displayed with a visual indication consistent with corresponding folder access privileges (e.g., ghosted or grayed out, or not displayed at all).

141. A person of ordinary skill in the art would have had multiple motivations to make this combination. Parker itself states that "it is envisioned that a user accessing the network via its user privilege, will be able to distinguish whether the listed sharepoints are inaccessible, or accessible for read & write, read-only or write only via various access indicating icons." (Parker, 11:50-54 (underlining added).) The addition of this known element from Parker would provide a clear improvement to Boyce by allowing a delegate to visually determine the extent of access to which it is permitted. This would also result in a more streamlined user experience in that the delegate could preemptively avoid attempting to perform certain operations (e.g. deleting items) that are not permitted.

142. Lastly, for the same reasons discussed above in claim 7[a][1] regarding "generat[ing]" configurable applications, Boyce also teaches that the system **generates** the at least one configurable link. Boyce makes clear that the OWA software generates the OWA pages, including the clickable icons, displayed in a user's web browser. (Boyce, pp.22, 875, 890-91.)

"wherein the configurable link is based on information concerning a profile of at least one user of the system and a rule that is configurable by a user acting in the role of an administrator"

143. The "**configurable link**" in Boyce—e.g., the clickable Inbox icon—is **based on information concerning a profile of at least one user of the system**—in this case, both the administrator and the delegate. This is because, as discussed above, Boyce teaches that whether a clickable icon appears in OWA for a particular delegate depends on the delegating user's settings, and those settings include attributes about the delegate user, such as the delegate's name.

144. Boyce and Parker both confirm that the configurable link is **based on a rule that is configurable by a user acting in the role of an administrator**. The "**rule that is configurable**" takes the form of delegation rules for a particular delegate. As I explained above, a user may specify whether a delegate has "Folder Visible" privileges for a particular folder, such as a user's inbox, contacts or calendar, and Boyce discloses, and renders obvious, that the folder's clickable icon

is not displayed to a delegate unless that delegate has at least "Folder Visible" privileges. Boyce in view of Parker further disclose that the display of the clickable icon to a delegate is based on the permissions granted to that delegate which, as explained above, are based on the profile of both the administrator and the delegate.

145. As to the requirement that a user **act[] in the role of an administrator**, they do so at least when using the delegation interface to configure delegate rules for their account, as I have already explained.

[the rule] "relates to which of the users of the system are permitted to view content of the configurable application to which the configurable link points"

146. Boyce also discloses the last portion of this limitation. As I have already discussed in detail, the purpose of the delegation feature is to manage "**which users of the system are permitted to view content**" of another user's inbox, contacts or calendar, each of which, as I detailed above, qualifies as a "**configurable application**."

(e) "embed the configurable link on the web site" (Claim 7[a][4])

147. Boyce discloses this limitation. As I have explained above, Exchange with OWA provides a web site, comprising a series of web pages, that a user can access using a web browser. As shown in the figures depicting the pages for OWA, the clickable icons to access the inbox, contacts and calendar pages—i.e.,

the configurable links—are embedded on the web site by their inclusion in the OWA web-based interface. For example:

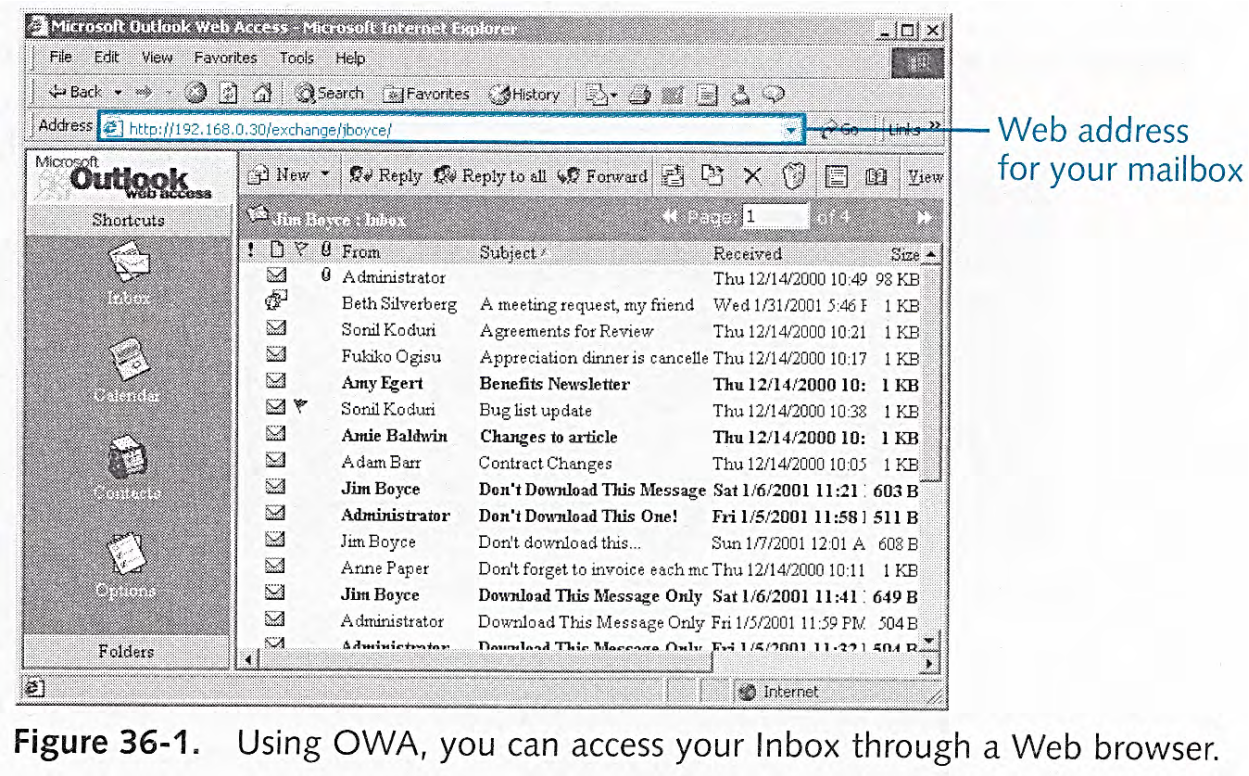


Figure 36-1. Using OWA, you can access your Inbox through a Web browser.

(Boyce, p.872.)

(f) "selectively display content of one of the configurable applications in response to a selection of the configurable link that points to the configurable application by one of the users who is permitted to view the configurable application" (Claim 7[a][5])

148. The disclosures of Boyce that are relevant to this limitation have already been discussed above. Boyce discloses that when a user clicks one of the clickable icons in the left pane display of OWA, the corresponding "configurable application" will be displayed in the right pane. Thus, for example, clicking the

"Inbox" icon (a "**configurable link**") will cause the user's inbox page (a "**configurable application**") to be displayed in the right pane. I further explained that delegates may be permitted to view a user's inbox and that, to the extent not expressly disclosed, it would have been obvious for a delegate to also be permitted to view the user's inbox using OWA.

149. Boyce further discloses that the contents of a user's inbox are "**selectively displayed**" to a delegate. Boyce discloses that a user may specify whether a delegate can view the user's "private items," as shown in the figure below:

(Boyce, p.553.) Boyce explains that the "Delegate can see my private items" setting shown in the figure above "[a]llows the delegate to view items you've marked as private. Clear this option to hide your private items." (Boyce, p.682.)

150. Boyce makes clear that this setting applies to content in a user's inbox and calendar. Both messages and calendar items may be marked private. (Boyce,

p.809 ("For example, you might let a delegate view your existing calendar items and create new ones but prevent the delegate from viewing items marked as private." (underlining added)), p.683 (describing delegate restrictions on a calendar), p.794 (describing "message sensitivity" and explaining that "[y]ou can set one of four levels of sensitivity—Normal, Personal, Private, or Confidential."), p.179 (describing message sensitivity), p.383 (Figure 14-2 showing "Private" checkbox in lower right corner of window displaying contact information), p.74 (Figure 3-16, "Private" checkbox for contact information), p.9 (Figure 1-5, "Private" checkbox for contact information).)

151. Accordingly, Boyce teaches that the contents of a user's inbox (or contacts, or calendar) are "**selectively displayed**" to that delegate depending on the setting for the "Delegate can see my private items" option. Boyce explains:

> If you are acting as a delegate for another person, you can open the folder to which you've been given delegate access and use them as if they were your own folders, subject to the permission applied by the owner. For example, suppose that you've been given delegate access to your manager's schedule. You can open his or her Calendar folder and create appointments, generate meeting requests, and perform the same tasks you can perform in your own Calendar folder. However, you might find a few restrictions. For example, you won't be able to view the contents of personal items unless your manager has configured permissions to give you that ability.

(Boyce, p.683 (underlining added).)

152. Therefore, Boyce discloses and renders obvious this limitation, and for all of the reasons explained above, Boyce in view of Parker discloses and renders obvious claim 7.

2. Claim 8

153. Claim 8 recites:

> The method of claim 7, wherein:
>
> one of the configurable applications is an events application that schedules and displays events based at least in part on inputs received from one of the users of the system;
>
> one of the configurable applications is a communications application that displays communications received from multiple users of the system; and
>
> further comprising the step of automatically displaying communications related to events scheduled in the events application in the communications application.

('720, 24:20-30 (claim 8).) I explained above that Boyce and Parker disclose and make obvious claim 7. Boyce further discloses and renders obvious each limitation of claim 8. I address each limitation in turn.

"one of the configurable applications is an events application that schedules and displays events based at least in part on inputs received from one of the users of the system"

154. I note that claim 7, from which claim 8 depends, recites "generat[ing] at least a first configurable application and a second configurable application," one of which is a "biography application." Claim 8 further recites that "one of the configurable applications" is an "events application" and "one of the configurable applications" is a "communications application." However, the claim does not recite generating a *third* configurable application, even though three applications—biography, events, and communications—are recited between claims 7 and 8. Therefore, based on the claim language, the configurable application that corresponds to the "biography application" may also qualify as the "events application" or the "communications application." This makes sense, because it is possible, for example, that an "events application" could provide information about a person or group of persons and therefore also qualify as a "biography application." (*See* Part III.C above (providing broadest reasonable constructions of "biography application" and "biographical information").) In light of the foregoing, as explained below, Boyce discloses the claimed "events application" in the form of the calendar page provided by OWA.

155. I described the calendar page provided by OWA in my discussion of claim 7 above. As I set forth above, Boyce explains that the calendar functionality provided by OWA displays scheduled calendar items ("**events**") to a user and allows the user to provide input to create items to add to the calendar. For example, as shown in the figure below, OWA displays scheduled events to a user:

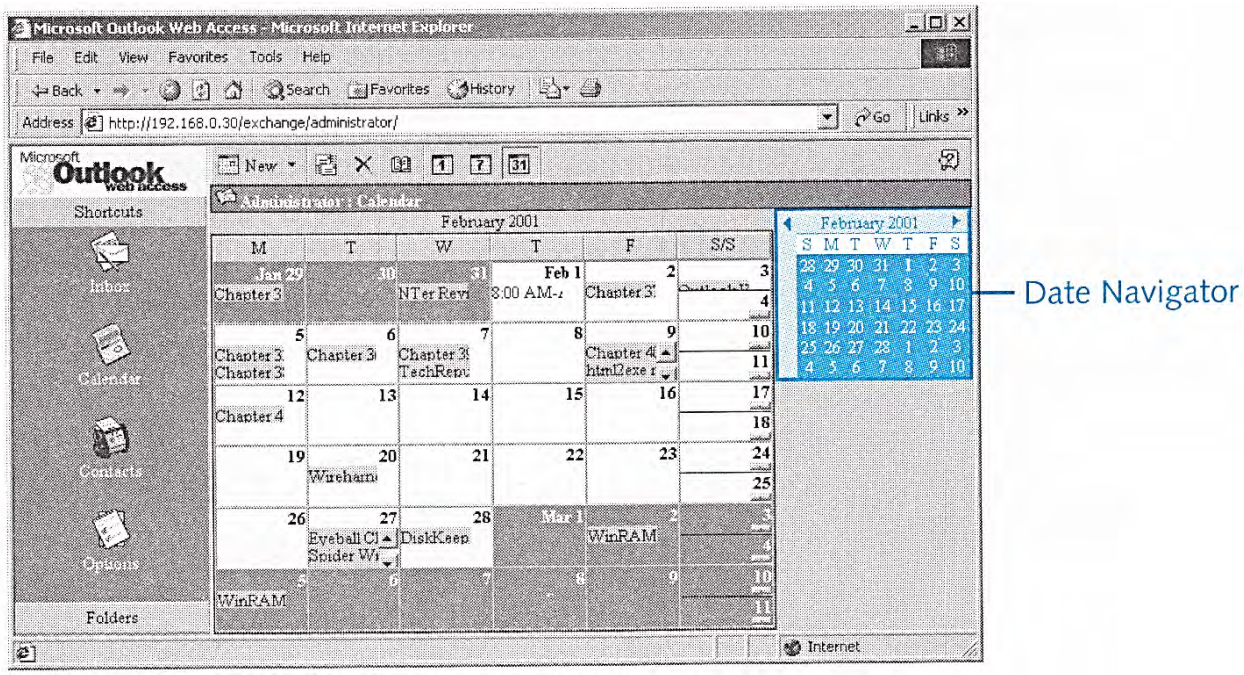


Figure 36-23. You can view and modify your schedule in OWA.

(Boyce, p.897; *see also id.*, p.873 ("You can also access your Calendar folder through OWA. You can view and modify existing items and create appointments.").)

156. Boyce further teaches the scheduling and display of events is "**based at least in part on inputs received from one of the users of the system**." In

particular, Boyce explains that OWA allows a user to add events to the calendar: "Click the New toolbar button to click the arrow beside New and choose Appointment to display an appointment form similar to the one in Outlook. Use the appointment form to specify the title, the time, and other properties for the appointment, just as you would in Outlook." (Boyce, pp.897-98 (underlining added).)

157. Lastly, Boyce confirms that the calendar page of OWA qualifies as a "**configurable application**." As I have discussed, Boyce explains that OWA provides calendar content, such as scheduled events, on a web site (i.e., "network site"). (Boyce, e.g., p.897 (Figure 36-23).) Moreover, the calendar content can be modified or configured. Boyce explains that a user can create and modify calendar items. (Boyce, e.g., pp.873, 897-98.) The calendar content also qualifies as a "configurable application" because a user can manage delegation rules to configure whether and what particular calendar content another user can see, as I have already explained at length. (Boyce, e.g., pp.681-683, 809.)

"one of the configurable applications is a communications application that displays communications received from multiple users of the system"

158. The "**communication application**" corresponds in Boyce to the inbox page provided by OWA. As shown in the figures below, which depict the inbox

for user Jim Boyce, the inbox displays communications received from multiple users of the system, such as "Anne Paper" and "Fukiko Ogisu":

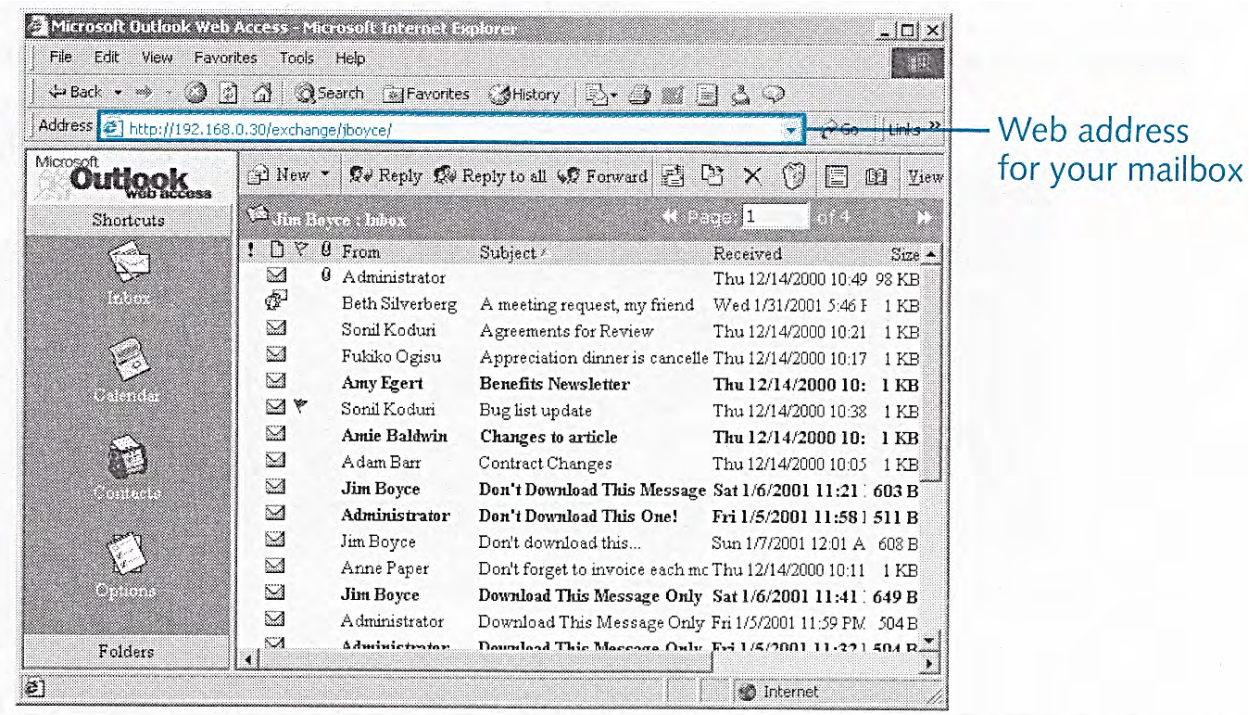
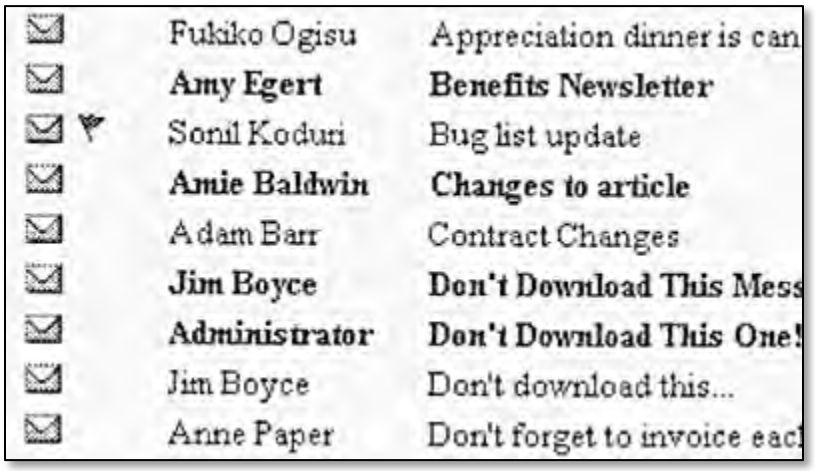


Figure 36-1. Using OWA, you can access your Inbox through a Web browser.

(Boyce, p.872.)



(Boyce, p.872 (excerpt of Figure 36-1).)

159. As already explained above in **Part IV.C.1.b** with respect to claim 7[a][1], Boyce makes clear that, for example, "Anne Paper" and "Fukiko Ogisu" are users of the system. Thus, Boyce discloses "**a communications application that displays communications received from multiple users of the system**," as claimed.

160. Boyce further confirms that the inbox page (i.e., the "communications application") is a "**configurable application**." As I have discussed, Boyce explains that OWA provides inbox content, including a listing of the subject and sender of each received message, on a web site (i.e., "network site"). (Boyce, e.g., p.872 (Figure 36-1).) Moreover, the inbox content can be modified or configured. For example, Boyce explains that a user can delete messages. (Boyce, p.872 ("OWA supports e-mail access. Users can view messages headers and read messages (see Figure 36-1) as well as send, reply to, forward and delete messages.").) The inbox page also qualifies as a "configurable application" because a user can manage delegation rules to configure whether and what particular inbox content another user can see, as I have already explained at length. (Boyce, e.g., pp.681-682.)

161. I note that the specification of the '720 patent states that the "communications application" can "be used by users **50** to interact with the

organization sponsoring the web site." ('720, 12:24-25 (underlining added).) As I explained in my discussion of the broadest reasonable construction of "communications application," this statement describes a potential use of such an application, and not a requirement of the term under its broadest reasonable construction. But even if such a use of a "communications application" was required by the claim, it would still be disclosed and rendered obvious by Boyce.

162. In particular, as already discussed for claim 7[a][1] above, Boyce makes clear that the Outlook/Exchange system, including the OWA web site, can be set up and used by an organization. Boyce explains, for example, that "[w]hether you're composing messages offline or creating tasks to assign to others, chances are good that you want to access your Exchange Server address book so that you can address messages to other users in your organization." (Boyce, p.864 (underlining added).) As to OWA in particular, Boyce advises that "[a]s you begin planning how you will deploy and manage your Exchange Servers in light of OWA, keep the front-end-back-end topology requirements in mind. Decide which strategy . . . makes the most sense for your organization." (Boyce, p.878 (underlining added).) Therefore, Boyce discloses, and makes obvious to a person of ordinary skill in the art, that a user's OWA inbox page can be used to "interact with the organization sponsoring the web site."

"further comprising the step of automatically displaying communications related to events scheduled in the events application in the communications application"

163. Boyce discloses this limitation. Boyce explains that a user who schedules an event involving other users will receive reply messages from the other users regarding their attendance, which will be automatically displayed in the inbox of the scheduling user.

164. More specifically, Boyce explains that "[w]hen you click the Send button on a meeting form, a meeting request e-mail message is sent to the invited attendees." (Boyce, p.526.) This e-mail message, Boyce explains, "allows the attendees to accept, tentatively accept, or reject the meeting invite; propose a new time for the meeting; and include a message in the reply." (Boyce, p.526.) The interface for an attendee to respond to the request is shown below:

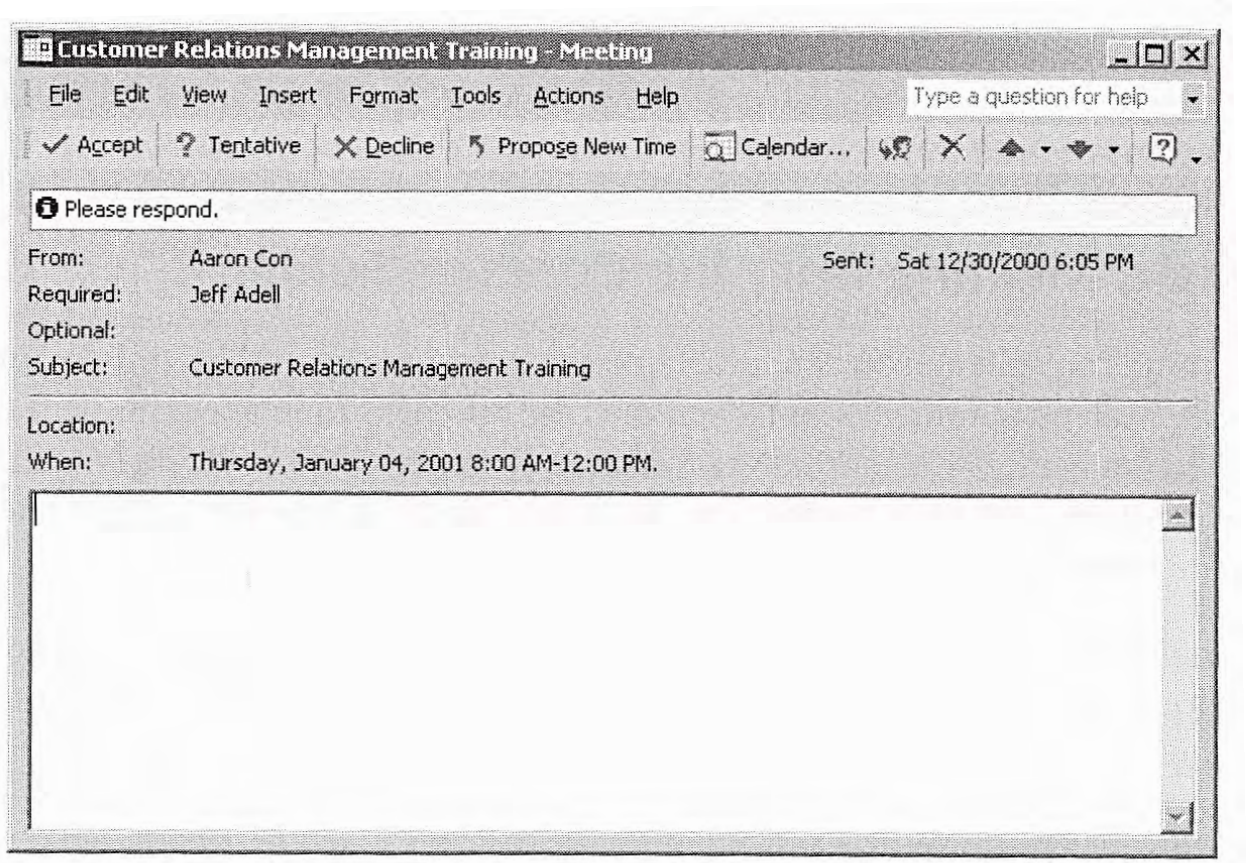


Figure 19-5. This meeting request has been received by an attendee.

(Boyce, p.526.) Boyce explains that, "[w]hen an invited attendee responds to a meeting request, a message is returned to you, the meeting organizer. This message contains the response, including any message the attendee chose to include." (Boyce, p.527 (underlining added).) An example of a user's reply message responding to the event is shown below:

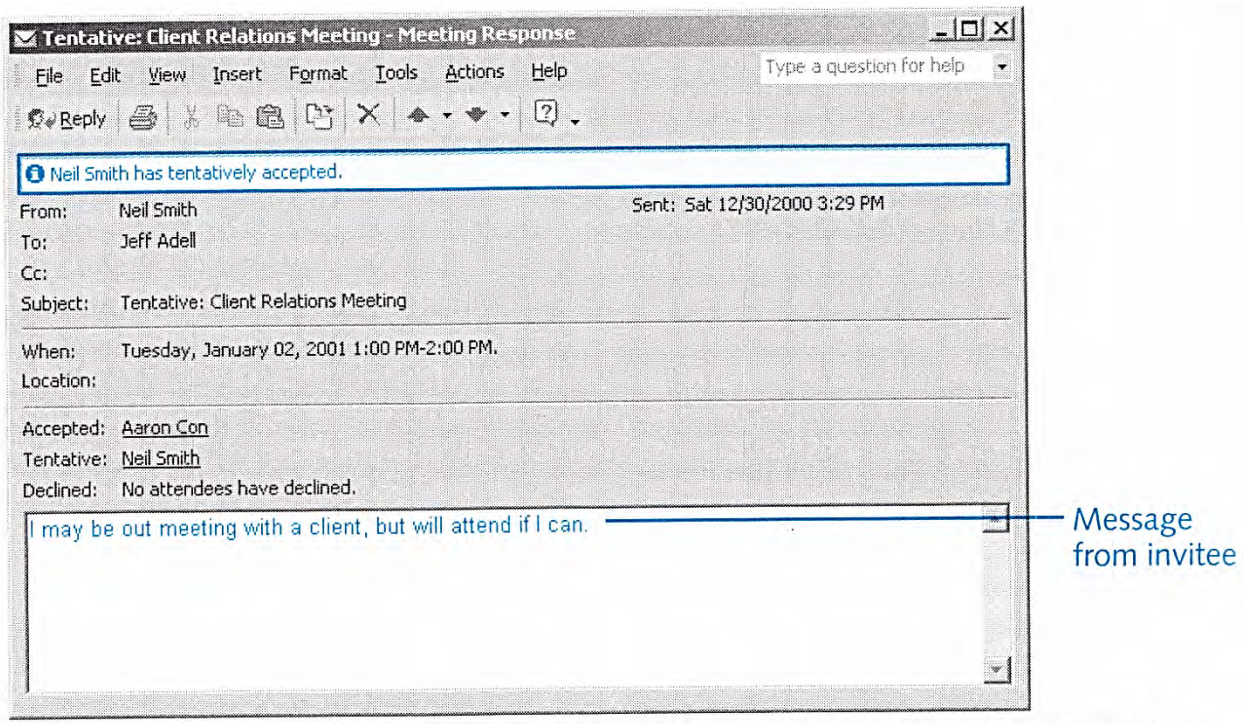


Figure 19-6. A response to a meeting request shows the acceptance status of the request and any message from the attendee.

(Boyce, p.528) Therefore, Boyce makes clear that a reply message related to an event scheduled in the "events application" is sent to the user who scheduled the event.

165. Boyce further teaches that the communications application "**automatically** display[s] communications related to events scheduled in the events application," as recited in the claim. Boyce states that "OWA automatically shows you your current messages when you connect." (Boyce, p.892 (underlining added); *see also id.*, p.890 ("OWA opens your Inbox by default."), p.60 ("The Inbox displays your default message store.").) Therefore, because, as noted above,

Boyce states that the reply message is sent in response to an e-mail, Boyce teaches that the reply message would be automatically displayed in the user's inbox.

166. Moreover, it would have been obvious to a person of ordinary skill in the art that the reply message would be displayed, automatically, in the user's inbox. Displaying the reply message related to the event in a user's inbox would yield the beneficial result of the scheduling user being able to immediately see responses from attendees upon logging into OWA, without requiring further user action. Therefore, Boyce in view of Parker discloses and renders obvious claim 8.

3. Claim 9

167. Claim 9 recites:

> The method of claim 7,
>
> wherein the user profiles may include information associating a user with a subgroup of all users of the web site and
>
> wherein a rule determines what content can be seen by which users based at least in part on whether users are associated with a particular subgroup.

('720, 24:31-35 (claim 9).) I explained above that Boyce in view of Parker discloses and makes obvious claim 7. Boyce further discloses each limitation of claim 9 and renders the claim obvious.

168. I have already covered the relevant disclosures of Boyce as they relate to the limitations of claim 9 in my discussion of delegation features in claim 7 above, and I therefore only repeat them briefly here. Claim 9 primarily introduces a concept of a "subgroup." Boyce discloses and makes obvious that each OWA user can have an associated group of other users who serve as "delegates" for that user—that group of delegates is a "**sub-group**" of all OWA users. Moreover, the user's delegation information is clearly part of their "**profile**" because it comprises attributes that relate to the user. (Boyce, e.g., pp.680-682.) Furthermore, as explained above, Boyce teaches that delegation rules are used by the software to determine what content users can see. (Boyce, e.g., pp.680-682.) For example, a delegate may have access to another user's inbox, but may not have access to that user's calendar. Therefore, a user's inclusion in a group of delegates, in combination with settings regarding what each user can see as a delegate, discloses the limitations of claim 9 and renders the claim obvious.

4. Claim 10

169. Claim 10 recites:

> The method of claim 7,
>
> wherein the step of selectively displaying the configurable applications in response to a selection of the configurable link further comprises applying the rule to information from the profile of the user

who selected the configurable link to determine what content the user who selected the configurable link is permitted to view.

('720, 24:36-41 (claim 10).) I explained above that Boyce in view of Parker discloses and makes obvious claim 7. Boyce further discloses each limitation of claim 10 and renders the claim obvious.

170. I have already covered the relevant disclosures of Boyce as they relate to the limitations of claim 10 in my discussion of delegation features in claim 7 above, and I therefore only repeat them briefly here. In particular, I explained that Boyce discloses that a user may decide whether to give a particular delegate access to the user's "private items," as shown in the figure below:

(Boyce, p.553.) Boyce explains that the "Delegate can see my private items" setting shown in the figure above "[a]llows the delegate to view items you've marked as private. Clear this option to hide your private items." (Boyce, p.682.)

171. As discussed above, Boyce further makes clear that this setting applies to content in a user's inbox, contacts, and calendar, and that a delegate can

select clickable icons ("**configurable link**") to access a delegating user's inbox, contacts, and calendar pages using OWA. (Boyce, e.g., pp.383, 683, 794, 809, 897-898.) Accordingly, Boyce teaches that depending on the delegation rules (that use profile information, such as the delegate's name) for a particular delegate, including whether the delegate may or may not see "private" items, the contents of the delegating user's inbox, contacts or calendar pages are "**selectively displayed**" to that delegate.

172. Therefore, Boyce in view of Parker discloses each limitation of claim 10 and renders the claim obvious.

D. Claims 2-6

1. Claim 2

173. Generally speaking, claim 2 is directed to substantially the same functionality as claim 7 but in part uses slightly different language. The table below sets forth claim listings to compare claim 2 and claim 7. Identical language is underlined; however language of claim 2 that is not underlined is not materially different from the limitations of claim 7. For the same reasons discussed above for claim 7, claim 2 is disclosed by and obvious over Boyce in view of Parker. I briefly address the differences in language between claim 2 and claim 7 after the table.

Claim 2	Claim 7
2. A system, including a computer and a web site, for managing content displayable on the web site to multiple users of the system who have profiles stored on the system, comprising:	7. A method for managing content that is stored on a system and that is displayable on a web site to users of the system who have profiles saved in the system, the method being implemented on at least one computer having non-transitory computer-readable storage medium with an executable program stored thereon, the method comprising the steps of:
	executing the program stored on the computer-readable storage medium, wherein the program instructs the at least one computer to:
at least a first configurable application and a second configurable application, wherein each of the first and second configurable applications includes content that is stored on the computer and that is displayable to the users of the web site, and wherein one of the applications is a biography application that is managed by the computer and that displays biographical information that is received from and that is about one of the users of the system; wherein at least one of the configurable applications is generated by the computer at least in part based on inputs received from multiple users of the system, the inputs including at least one of text, graphics, sounds, documents, and multi-media content;	generate at least a first configurable application and a second configurable application, each configurable application having displayable content, wherein the generation of at least one of the configurable applications is based at least in part on inputs received from multiple users of the system, the inputs including at least one of text, graphics, sounds, documents, and multi-media content and wherein one of the applications is a biography application having biographical information that is received from and that is about one of the users of the system;
an administrator portal through which users of the system are permitted to act	generate an administrator portal through which users of the system are permitted

Claim 2	Claim 7
in the role of an administrator of certain web pages, wherein a user acting in the role of an administrator may manage business rules that utilize profiles of the users of the system to control interaction of the users with the certain web pages, wherein each user of the system is permitted to act in the role of an administrator at least with respect to a subset of web pages on the web site; and	to act in the role of an administrator of certain web pages, wherein a user acting in the role of an administrator may manage business rules that utilize profiles of the users of the system to control interaction of the users with the certain web pages, wherein each user of the system is permitted to act in the role of an administrator at least with respect to a subset of web pages on the web site; and
at least one configurable link on the web site that points to at least one of the plurality of configurable applications, wherein the at least one configurable link is generated by the computer based at least in part on a profile attributed to at least one user of the system and at least one rule that is configurable by a user acting in the role of an administrator and which applies user profiles to select what content stored on the computer can be viewed by which of the users of the system.	generate at least one configurable link that points to at least one of the configurable applications, wherein the configurable link is based on information concerning a profile of at least one user of the system and a rule that is configurable by a user acting in the role of an administrator and that relates to which of the users of the system are permitted to view content of the configurable application to which the configurable link points;
	embed the configurable link on the web site; and
	selectively display content of one of the configurable applications in response to a selection of the configurable link that points to the configurable application by one of the users who is permitted to view the configurable application.

174. Regarding the preamble of claim 2, for the reasons discussed above for claim 7, Boyce discloses a "system, including a computer and a web site, for managing content displayable on the web site to multiple users of the system who have profiles stored on the system." In particular Boyce discloses a system comprising one or more computers running Exchange Server software, Outlook software, and web browser software that allow a user to manage content—such as e-mail messages, calendar items, and contacts—and to display that content on a website. (Boyce, e.g., pp.872, 873, 874-875, 876-877.) Users of the system who have profiles stored on the system—i.e., individuals with an Exchange account and mailbox—can view the content using the OWA website. (Boyce, e.g., pp.761-762, 769-770, 890.) For a particular user's OWA web pages, Boyce discloses and makes obvious that the users include that particular user and any delegates specified by that particular user. (Boyce, e.g., p.878.)

175. Like claim 7, the "**first configurable applications**" corresponds to a user's OWA inbox web page and the "**second configurable application**" corresponds to the user's OWA contacts web page or, alternatively, to the user's OWA calendar web page. As already explained, each of these pages includes content that is stored on Exchange server and displayable to users of the OWA web site, including to the mailbox owner and that user's delegates who have been given

necessary access rights. (Boyce, e.g., pp.49, 790, 872, 874, 875, 878, 897.) The "**biography application**" as claimed corresponds to a user's OWA contacts web page or, alternatively, to the user's calendar page, as explained previously. (*See* claim 7[a][1] discussion above.) These web pages are "**managed by the computer**" because, as discussed earlier, the server stores mail, contact, and calendar items and generates the corresponding web pages. (Boyce, e.g., 49, 790, 872, 873, 897, 898.)

176. Turning to the last limitation of claim 2, the "**configurable link on the website**" as claimed corresponds to the clickable icons in the OWA web display, as explained for claim 7[a][3]. Because Boyce in combination with Parker teaches that those icons are generated based on whether a user has "Folder Visible" privileges that are specified by a delegating user through the delegate interface as explained for claim 7[a][2], Boyce and Parker disclose and render obvious this limitation.

2. Claim 3

177. Claim 3 recites:

3. The system of claim **2**, wherein the configurable link is a URL.

As explained above, Boyce in view of Parker discloses and renders obvious claim 2. Boyce further discloses and makes obvious that the "configurable link" is a URL.

178. In particular, Boyce discloses, suggests and render obvious that the clickable icon for each of the OWA inbox, contacts, and calendar web pages includes a URL. Boyce teaches that OWA is a web-based system that uses hyperlinks and URLs to identify and provide access to information—including items and folders—stored on the server. Boyce explains, for example, that "users are accustomed to seeing their messages in Outlook's Inbox, but they can see the same messages rendered in HTML by using browsers to navigate to the address of a message, such as *http://myserver/exchange/user1/inbox/newmessage.eml*." (Boyce, p.1009.) As shown in the figures below, Boyce provides an example of a particular message in user Jim Boyce's inbox being accessible at the URL <http://192.168.0.30/exchange/jboyce/Inbox/Don't download this....EML?Cmd=open> using the OWA display:

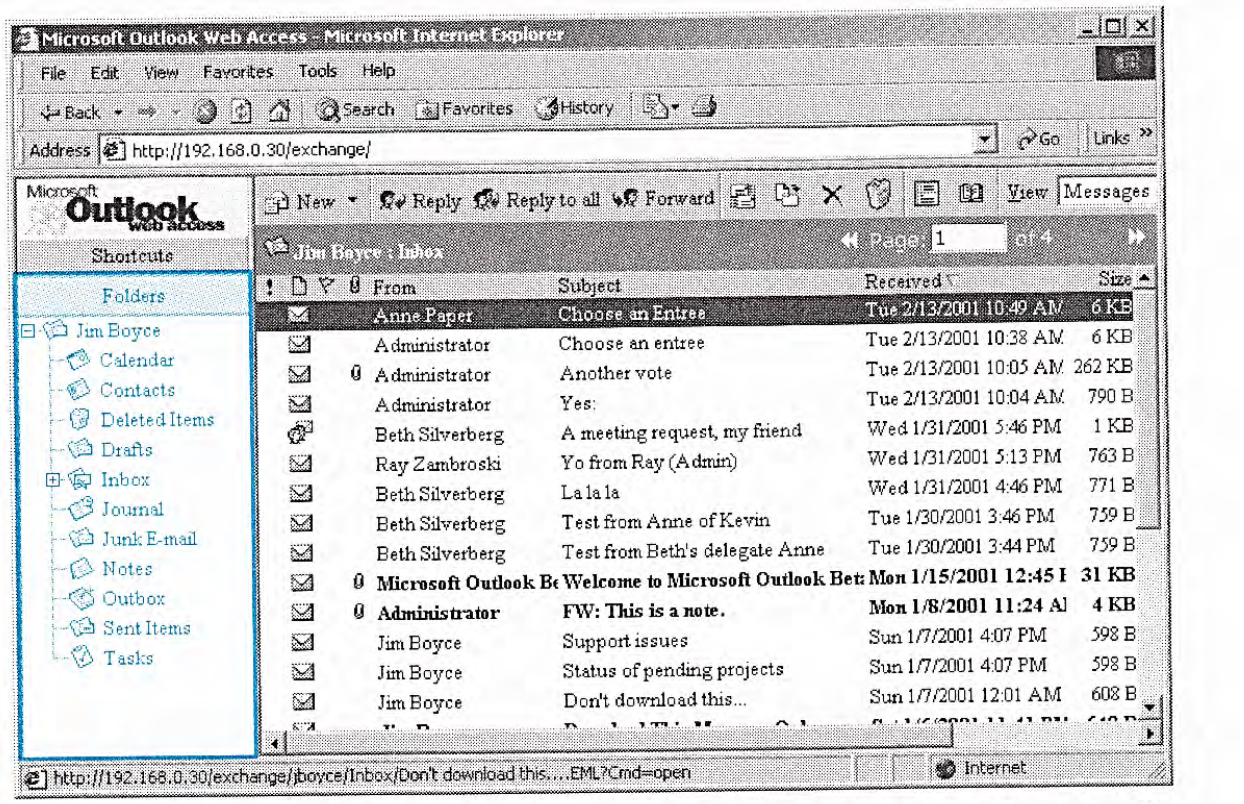
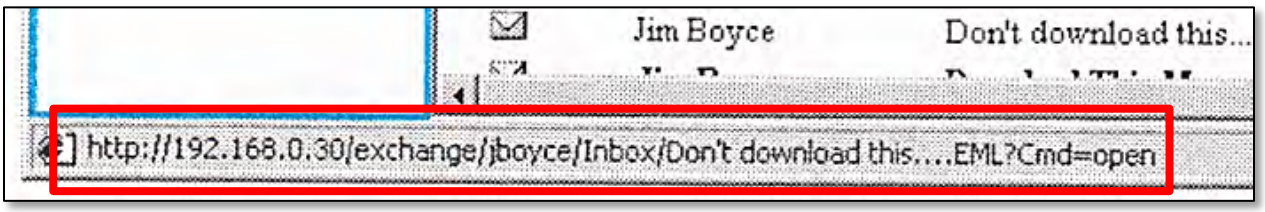


Figure 36-21. Drag messages to the folder list to copy or move them.

(Boyce, p.895.)



(Boyce, p.895 (excerpt; red box added); *see also id.*, p.872 (explaining that "jboyce" in URL corresponds to Jim Boyce's account name).) Describing the list of inbox messages such as those shown in the display above, Boyce explains that "[e]ach message in OWA 5.5 acts like a hyperlink. You can click once on the message to open it." (Boyce, p.892 (underlining added).)

179. Boyce further explains that folders, in addition to individual items such as messages, have associated URLs. For example, Boyce explains that "if you added a public folder under the Public virtual directory and gave it the alias *support*, users would connect to the URL *http://<server>/public/support* to use the folder." (Boyce, p.889 (underlining added).) Boyce further suggests that the OWA inbox, contacts and calendar web pages of a particular user are accessible using similar URL addressing. Referring again to the URL for the message shown above, I note that the URL includes <http://192.168.0.30/exchange/jboyce/Inbox/>, which suggests that the Inbox folder for Jim Boyce can be accessed using that URL, just like the "support" folder can be accessed at the URL <http://<server>/public/support>. (*See* Boyce, p.872 (explaining that "jboyce" in URL corresponds to Jim Boyce's account name).) Therefore, Boyce discloses and suggests that a clickable icon includes a hyperlinked URL that points to the corresponding OWA web page of a particular user.

180. Moreover, it would have been obvious to a person of ordinary skill in the art that the clickable icons described by Boyce would comprise hyperlinked URLs that point to, and are used to retrieve, the web pages of a particular user associated with those icons. For example, the clickable icon for Jim Boyce's Inbox folder could comprise the hyperlinked URL

<http://192.168.0.30/exchange/jboyce/Inbox/>, while the contacts and calendar pages could similarly respectively comprise the hyperlinked URLs <http://192.168.0.30/exchange/jboyce/Contacts/> and <http://192.168.0.30/exchange/jboyce/Calendar/>. Such a system would have involved the combination of existing functionality already described by Boyce and would have predictably resulted in the clickable icons including hyperlinked URLs pointing to the web pages of their corresponding folders.

3. Claim 4

181. Claim 4 depends from claim 2, which as explained above, is disclosed by and obvious over Boyce in view of Parker. Claim 4 and claim 8 are substantially similar. The table below sets forth claim listings to compare claim 4 and claim 8, with identical language is underlined.

Claim 4	Claim 8
4. The system of claim **2**, wherein: one of the configurable applications is an events application that schedules and displays events based at least in part on inputs received from at least one user of the system;	8. The method of claim 7, wherein: one of the configurable applications is an events application that schedules and displays events based at least in part on inputs received from one of the users of the system;
one of the configurable applications is a communications application that displays communications provided by a plurality of the users of the web site; and	one of the configurable applications is a communications application that displays communications received from multiple users of the system; and
communications related to events	further comprising the step of

Claim 4	Claim 8
scheduled in the events application are automatically displayed in the communications application.	automatically displaying communications related to events scheduled in the events application in the communications application.

182. As shown in the table above, claim 4 and claim 8 are not materially different. Therefore, my discussion of claim 8 applies to claim 4. I note that claim 4 recites "users of the web site" while claim 8 recites "users of the system." This is not a material distinction. As I have already discussed, Boyce explains that the OWA website is enabled by default for every Exchange server mailbox. (Boyce, p.885.) Therefore, "users of the web site" and "users of the system" are the same in Boyce.

4. Claim 5

183. Claim 5 depends from claim 2, which as explained above, is disclosed by and obvious over Boyce in view of Parker. Claim 5 is substantially similar to claim 9. The table below sets forth claim listings to compare claim 5 and claim 9 with identical language is underlined.

Claim 5	Claim 9
5. The system of claim 2, wherein the user profiles may include information associating a user with a subgroup of all users of the system, and wherein the rule determines what content can be seen by which users based at least in part on	9. The method of claim 7, wherein the user profiles may include information associating a user with a subgroup of all users of the web site and wherein a rule determines what content can be seen by which users based at least in part on

Claim 5	Claim 9
whether users are associated with a particular subgroup.	whether users are associated with a particular subgroup.

184. As shown in the table above, claim 5 and claim 9 are not materially different. Therefore, my discussion of claim 9 applies to claim 5. I note that claim 5 recites "subgroup of all users of the system" while claim 9 recites "subgroup of all users of the web site." This is not a material distinction. As I have already discussed, Boyce explains that the OWA website is enabled by default for every Exchange server mailbox. (Boyce, p.885.) Therefore, "users of the web site" and "users of the system" are the same in Boyce.

5. Claim 6

185. Claim 6 recites:

> 6. The system of claim **2**, wherein the at least one configurable link includes information concerning a user profile and information relating to which of the users of the system are permitted to view the configurable application to which the configurable link points.

('720, 23:39-43 (claim 6).) As I explained above, claim 2 is disclosed by and obvious over Boyce in view of Parker. Boyce and Parker further disclose and render obvious the limitations of claim 6.

186. In particular, as I explained above for claim 3, Boyce teaches and suggests that each clickable icon includes a URL that identifies the user who is the

owner of the mailbox. For example, the URL <http://192.168.0.30/exchange/jboyce/Inbox/> discloses that the OWA inbox web page corresponding to that URL is owned by the user having the account name "jboyce." This URL provides "**information concerning a user profile and information relating to which of the users of the system are permitted to view the configurable application to which the configurable link points**."

187. The URL contains the account name "**jboyce**," and therefore contains "**information concerning a user profile**," e.g., the profile of the administrator, Jim Boyce. (Boyce, e.g., p.878.) The URL also contains "**jboyce/Inbox**," which identifies the account name and the configurable application to which the URL points. This is information "**relating to which of the users of the system are permitted to view the configurable application to which the configurable link points**," because the information is used by the system to identify and retrieve Jim Boyce's inbox, which is displayed to the user in accordance with its access privileges. (Boyce, e.g., pp.681-683, 875.) For example, a delegate may be provided with access of "None" to the inbox or provided varying levels of access. (Boyce, pp. 681-82.) Figure 27-3, for example, notifies delegate "Anne Paper" that she has not been access of "None" to the administrator's inbox. (Boyce, p.682

(Fig. 27-3).) She could alternatively been given "Reviewer," "Author," or "Editor" access. (Boyce, p.682.)

E. Claims 11-30

1. Claim 11

188. Independent claim 11 shares many similarities with claims 1, 2 and 7 but again uses slightly different language. As explained below, for many of the reasons already discussed above for those claims, claim 11 is disclosed and rendered obvious by Boyce, alone or in view of Parker.

(a) "A system, including a computer, for managing content displayable on a collection of web pages to multiple users of the system who have profiles stored on the system, the users including an administrator of the collection of web pages, comprising:" (Claim 11[p])

189. For the reasons already discussed, Boyce discloses the preamble of claim 11. Boyce discloses a system that includes at least an Exchange Server computer that allows users to manage content (such as messages, calendar items, and contact items) that is displayable on a collection of OWA web pages. (*See* claim 7[p] discussion above.) I also explained above for claim 7[p] that Boyce teaches that the users have profile information (such as account information) stored on the system. Furthermore, I also explained above for claim 7[a][2] that Boyce discloses an administrator in the form of a mailbox owner who can, among other

things, manage whether and how other users can access the OWA web pages for that mailbox. (Boyce, e.g., pp.680-683.)

(b) "a plurality of configurable applications that are managed by the computer, including at least a first configurable application and a second configurable application, wherein the first and second configurable applications each includes content displayable on the collection of web pages, wherein the content includes at least one of text, graphics, sounds, documents, and multi-media content;" (Claim 11[a])

190. The "**plurality of configurable applications**" corresponds to the OWA inbox web page and the contacts web page, or alternatively, the calendar web page, for a particular user. For the reasons explained above for claim 7[a][1], the "**first configurable application**" corresponds to the OWA contacts web page, or alternatively, the calendar page, while the "**second configurable application**" corresponds to the OWA inbox web page. As previously discussed, each of these pages includes displayable content, such as text.

(c) "wherein the first configurable application is a biography application that displays biographical information about the administrator of the collection of web pages;" (Claim 11[b])

191. For the reasons discussed above for claim 7[a][1], the claimed "**biography application**" corresponds to the contacts web page for a user, such as Jim Boyce, the "administrator" of the collection of web pages (e.g., Jim Boyce's inbox, contacts, and calendar pages). Boyce explains that the contacts page may

display biographical information about any user of the system including about Jim Boyce. (Boyce, p.898 (Figure 36-24 ("You may view and manage the Contacts folder in OWA"), p.899 (Figure 36-25, showing creation of new contact for "Jim Boyce").)

192. Boyce expressly teaches how an administrator can create its own contract entry in order to be able to share that contact with other users. (Boyce, p.416 ("The second method of sharing a contact is useful when you want to share your own contact information . . . Follow these steps . . . **1** Create your own contact entry if you have not already done so.").) The user's contact information can then be shown on that user's contact page. (Boyce, p.416 ("You can use this method to share your own contact information . . . **1** In the Contacts folder, select the contact item you want to send as a vCard.") (underlining added).) The contacts page in Boyce therefore discloses a "**biography application that displays biographical information about the administrator of the collection of web pages**," as claimed.

193. As explained previously for claim 7[a][1], the calendar page in Boyce also qualifies as the "first configurable application" because it can display biographical information about the administrator, such as information about that user's schedule. As explained for claim 7[a][1], Boyce teaches that both of these

pages include information about the user who owns the mailbox—i.e., the administrator.

(d) "wherein the second configurable application is generated by the computer at least in part based on content received from the administrator and at least in part based on content received from one or more of the other users of the system;" (Claim 11[c])

194. Boyce teaches that an OWA inbox web page—i.e., the "**second configurable application**"—is "**generated by the computer**." As explained previously, Boyce teaches that the OWA web pages are generated by the server in response to a request from a user. (Boyce, p.875.) Boyce further discloses that an OWA inbox web page is generated based on "**content received from the administrator**" and "**content received from one or more other users of the system**." As shown in the figure below, for example, the inbox of user Jim Boyce lists messages received from both Jim Boyce (the "**administrator**") and from other users, such as Anne Paper and Amie Baldwin:

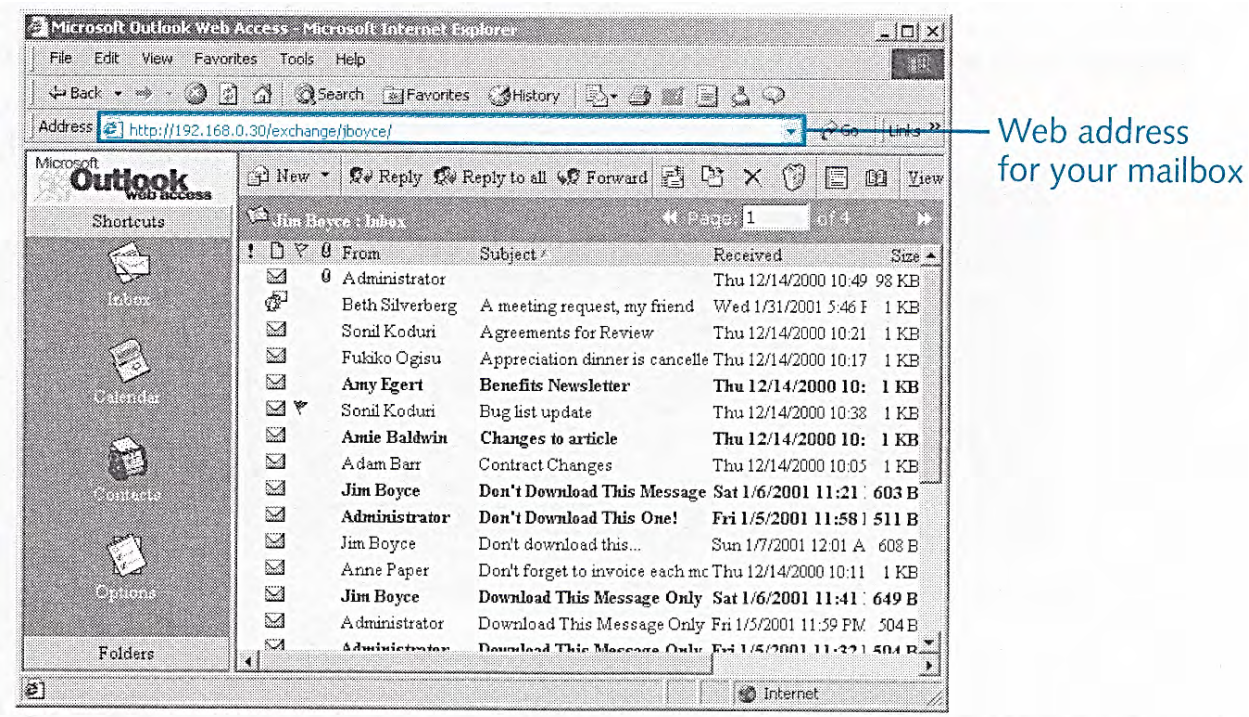


Figure 36-1. Using OWA, you can access your Inbox through a Web browser.

(Boyce, p.872.)

195. In addition to a mailbox owner sending a message to their own mailbox, Boyce discloses, suggests and makes obvious at least two other ways the OWA inbox web page is generated based on "**content received from the administrator**."

196. First, Boyce describes distribution list feature:

> If you often send messages to groups of people, adding all their addresses to a message one at a time can be a real chore, particularly if you're sending the message to a lot of recipients. As in other e-mail applications, *distribution lists* in Outlook help simplify the process, allowing you to send a message to a single address and have it

> broadcast to all recipients in the group. Rather than addressing a message to each individual user in the sales department, for example, you could address it to the sales distribution group. Outlook (or Exchange Server) takes care of sending the message to all members of the group.

(Boyce, p.135.) Boyce's description teaches that a member of a distribution list who sends a message to that distribution list will also receive that message. For example, if a user in the sales department sent a message to the sales distribution group, that user would receive the message in their own inbox. Such a scenario is a predictable use of a distribution list. For example, one member of the sales department might desire to send a communication to all members of the sales department regarding recent sales activities or milestones. Boyce identifies at least one motivation for the user to use the sales distribution list—"adding all their addresses to a message one at a time can be a real chore, particularly if you're sending the message to a lot of recipients." (Boyce, p.135.) Boyce therefore teaches that a user sending a message to a distribution that includes the sending user is another way in which Boyce discloses a configurable application (e.g., the user's own OWA inbox web page) that is generated based on "**content received from the administrator**."

197. Second, Boyce describes an option in which a user can specify whether their reply messages are saved in the same folder as the original replied-to messages. (Boyce, p.198.) Because the messages are stored in the same folder, Boyce teaches that they would be displayed together on the same OWA web page. (Boyce, e.g., p.896 ("When you select a different folder, on the Outlook Bar, OWA displays the contents of the selected folder in the right pane." (underlining added)).) Therefore, if a user enables this option for their inbox, the inbox will store messages both to and *from* that user, and the resulting OWA inbox web page accordingly will be generated based on "**content received from the administrator**."

198. The interface for selecting the option is shown in the figure below:

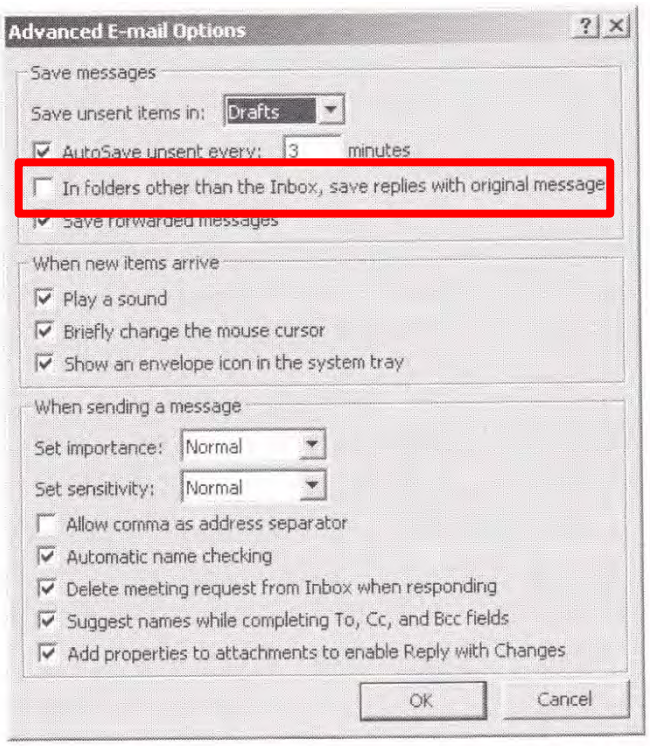


Figure 7-7. You can choose options for sending messages in the Advanced E-Mail Options dialog box.

(Boyce, p.181 (red box added).)

199. "With this option selected," Boyce explains, "Outlook saves a copy of the sent items to the Sent Items folder if the message originates from the Inbox (new message, reply, or forward). If the message originates from a message from a folder other than the Inbox—such as a reply to a message stored in a different folder—Outlook saves the reply in the same folder as the original." (Boyce, p.198 (underlining added).) While Boyce states that the option does not apply to message in a user's inbox, it would have been obvious to a person of ordinary skill in the art to provide this option to inbox messages. Doing so would have involved

the combination of existing features according to their established functionality and would have predictably resulted in the ability of a user to store (and display) inbox messages together with replies to those messages. A person of ordinary skill in the art would have been motivated to extend this option to the inbox folder to achieve the beneficial result of allowing a user to more efficiently see their replies together with the original replied-to messages, just as they could with messages stored in other folders.

(e) "at least one application link on at least one of the web pages that points to at least one of the plurality of configurable applications so as to enable the users to selectively activate the configurable application to which the application link points;" (Claim 11[d])

200. For the same reasons discussed above for claim 7[a][3] and 7[a][5], the "**application link**" as claimed corresponds to any of the clickable icons that can be selected to display the OWA inbox, contacts or calendar web pages. As explained for those limitations, each clickable icon identifies and **points** to its corresponding OWA web page, and Boyce explains that **users** can click the icon to **selectively activate** the corresponding OWA web page by causing the page to be retrieved and displayed. Moreover, Boyce in view of Parker discloses that the link is configurable, at least because the display of the link can be configured based on the accessing user's access level. (*See* claim 7[a][3] discussion above.)

> **(f) "a first business rule that is configurable by the administrator, wherein the system uses the first business rule and information in user profiles to determine which content of the second configurable application is viewable by which of the other users of the system; and" (Claim 11[e])**

201. For the reasons discussed above for claim 7[a][5], the "**first business rule**" as claimed corresponds to a setting for a delegating user to configure whether delegates can see items marked as "private" in folders of the delegating user that the delegates can access. (Boyce, p.681 (Figure 27-2).) As Boyce makes clear, if a delegate has not been configured to see a user's private items, any messages marked private in the user's inbox will not be displayed to the delegate in the user's OWA inbox web page (the "**second configurable application**"). (Boyce, p.682.)

> **(g) "a second business rule that is configurable by the administrator, wherein the system uses the second business rule and information in user profiles to determine which of the other users of the system are permitted to provide content to the second configurable application." (Claim 11[f])**

202. As explained below, Boyce discloses, suggests and renders obvious this limitation in at least two independent ways.

203. First, the "**second business rule**" in Boyce corresponds to a setting allowing an administrator to specify a delegate's level of access to the administrator's inbox. Boyce explains that the access levels include, among

others, "Folder Visible," "Reviewer" and "Editor." (Boyce, p.682, pp.687-688.) As explained previously, if a user only has "Folder Visible" access, the user can only "see the folder." (Boyce, p.687.) But if the user has "Editor" access, the user "can read existing items, create new ones, and modify existing ones, including deleting items." (Boyce, p.682.) This would allow, for example, a delegate to send an email message on behalf of the administrator. As explained above, the delegate feature utilizes the user profile of the administrator and the delegate.

204. Moreover, as I explained in detail above, it would have been obvious to a person of ordinary skill in the art that a message sent by (or on behalf of) the administrator could appear in the administrator's inbox page in OWA. (*See* Boyce, p.872 (Figure 36-1 showing Jim Boyce's inbox with messages sent by Jim Boyce and others), p.135 (distribution lists), p.198 (save reply messages in same folder as replied-to message); *see* claim 11[c] discussion above.)

205. The second way in which Boyce discloses this limitation is through the use of "message rules." "A *message rule* defines the action Outlook takes for a sent or received message if the message meets certain conditions specified by the rule." (Boyce, p.231.) Message rules, Boyce explains, "gives you the means to block [] messages or process them automatically to unclutter your Inbox." (Boyce, p.231.) "For example, you can have all messages sent from a specific account sent

to a specific folder." (Boyce, p.231.) Boyce explains that "some of the most common tasks you might perform with message rules" include "copy[ing] or mov[ing] message from one folder to another" and "delet[ing] message automatically." (Boyce, p.232; *see also id.*, p.234 (describing "server-side rules" that "reside on the Exchange Server" and "can usually process messages in your Exchange Server mailbox whether or not you're logged on and running Outlook.").) Therefore, Boyce expressly discloses and suggests that message rules specified by a user can control which other users can provide content to a user's OWA inbox web page. For example, if a user configures a message rule to move a particular sender's emails to another folder, or to delete them altogether, that sender will not be able to provide content to the user's OWA inbox web page. Boyce further teaches that this sort of sender-based rule uses sender profile information (such as the sender's name or e-mail address). (Boyce, pp.236-240 (describing creation of rule for messages from user "Beth Silverberg").) Boyce expressly notes that these sorts of operations are in fact "some of the most common tasks you might perform with message rules."

2. Claim 12

206. Claim 12 recites:

> 12. The system of claim **11**, wherein the application link is generated by the computer based at least in part on the first and/or the second configurable business rule.

('720, 25:12-14 (claim 12).) As explained above, claim 11 is disclosed by and obvious over Boyce in view of Parker. Boyce and Parker further disclose, suggest, and render obvious the limitations of claim 12.

207. For the reasons discussed above for claims 7 and 11 in connection with the "configurable link" and "application link," Boyce in view of Parker discloses and renders obvious claim 12. As I explained for claim 11, the "**application link**" corresponds to the clickable icon for the OWA inbox web page.

208. This claim requires that the application link be generated by the computer based in part "on the first **and/or** the second configurable business rule," and Boyce and Parker render both alternatives obvious. As to the "**first configurable business rule**," the setting for a delegating user to configure whether delegates can see items in folders marked as "private," generating the application link based on this rule would have been obvious to a person of ordinary skill in the art in view of Parker. As explained above for claim 7, Parker makes clear, and provides express motivation, to generate the clickable icon and to vary its visual representation based on the user's access level. For example, a user with read access could be presented with a clickable icon that included a depiction of a set of

eye glasses, while a user with write access could be presented with an icon that included a depiction of a writing instrument. (Parker, 11:50-64.) Based on the teachings of Parker, it would have been obvious to a person of ordinary skill in the art to also provide a visual indication on a clickable icon of a user's privileges to access "private" items. Doing so would have involved extending the teachings of Parker to apply to another type of access level with the predictable and beneficial result of providing an efficient indication of a user's access levels with respect to a particular folder.

209. As to the "**second configurable business rule**," the setting allowing an administrator to specify a delegate's level of access to the administrator's inbox, as I explained above for claim 7[a][3], Boyce, alone or with Parker, makes clear that the clickable icon is generated based on whether a user has "Folder Visible" privileges for a particular folder. Moreover, as I explained in the previous paragraph, it would have also been obvious in view of Parker to generate the clickable icon and to vary its visual representation based on other access levels, such as "Reviewer" and "Editor." For example, a user with "Reviewer" (read-only) access could be presented with a clickable icon that included a depiction of a set of eye glasses, while a user with "Editor" (write) access could be presented with an icon that included a depiction of a writing instrument. (Parker, 11:50-64.)

3. Claim 13

210. Claim 13 depends from claim 11, which as explained above, is disclosed by and obvious over Boyce in view of Parker. Claim 13 is substantially similar to claim 3. The table below sets forth claim listings to compare claim 13 and claim 3 with identical language is underlined.

Claim 13	Claim 3
13. The system of claim **11**, wherein the application link is a URL.	3. The system of claim 2, wherein the configurable link is a URL.

211. As shown in the table above, the only difference between claim 13 and claim 3 is the recitation of an "application link" rather than a "configurable link." As explained above, these terms have the same broadest reasonable construction. Accordingly, for the reasons explained above for claim 3, Boyce in view of Parker also discloses and renders obvious claim 13.

4. Claim 14

212. Claim 14 recites:

> 14. The system of claim **11**, wherein the computer, in response to the addition of new content to one of the configurable applications by one of the users of the system, generates a link that enables a user to selectively activate the new content to which the link points.

('720, 25:17-21 (claim 14).) As explained above, claim 11 is disclosed by and obvious over Boyce in view of Parker. Boyce further discloses, suggests, and renders obvious the limitations of claim 14.

213. Boyce discloses the limitations of claim 14. In particular, Boyce explains that communications received from other users to a particular user's inbox are listed in the particular user's OWA inbox web page generated by the server. An example of that listing is shown below:

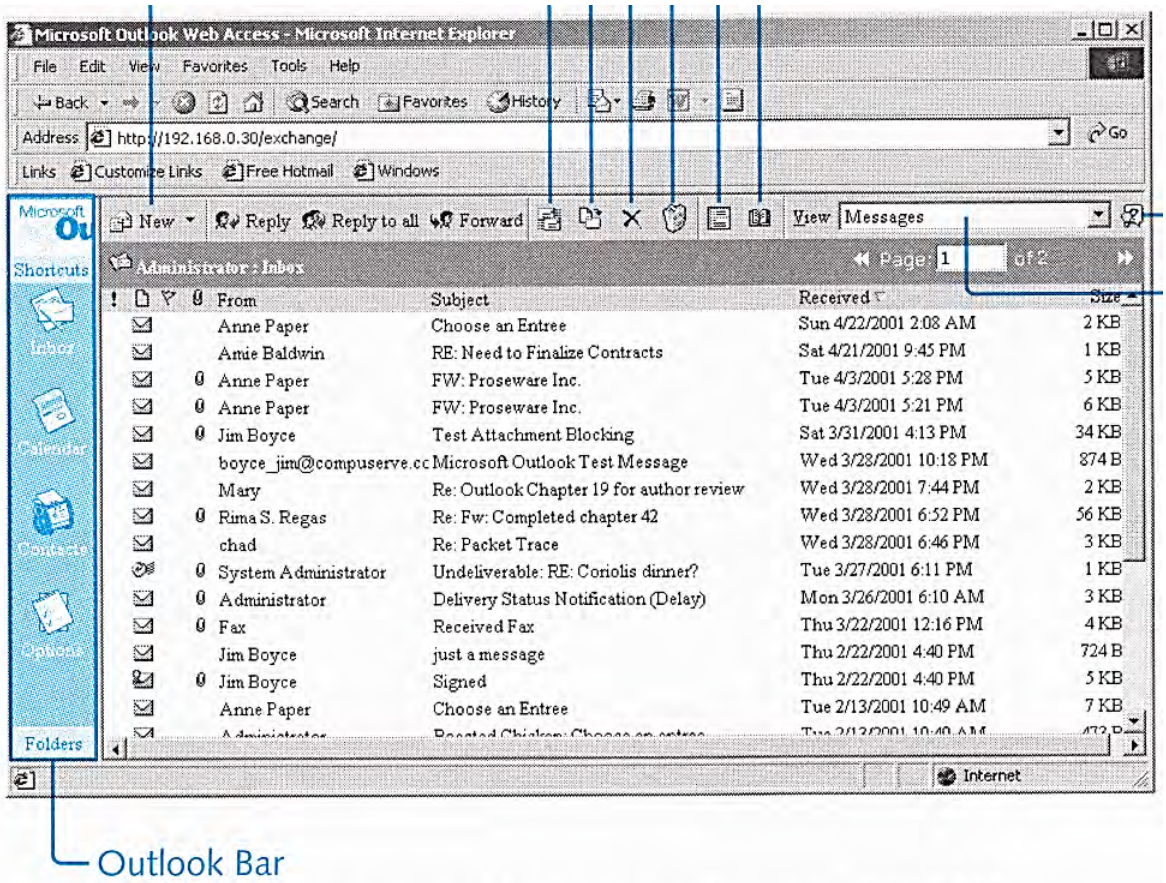


Figure 36-15. This is a typical look at a mailbox in OWA 2000.

(Boyce, p.891 (Figure 36-15 (excerpt).)

214. Boyce further explains that each message listed in the display is a link that points to the message's full contents. "Each message in OWA 5.5 acts like a hyperlink. You can click once on a message to open it." (Boyce, p.892 (underlining added).) For example, the listing above includes a message with subject "Choose an Entree," and the figure below displays the full message contents after clicking on the listing:

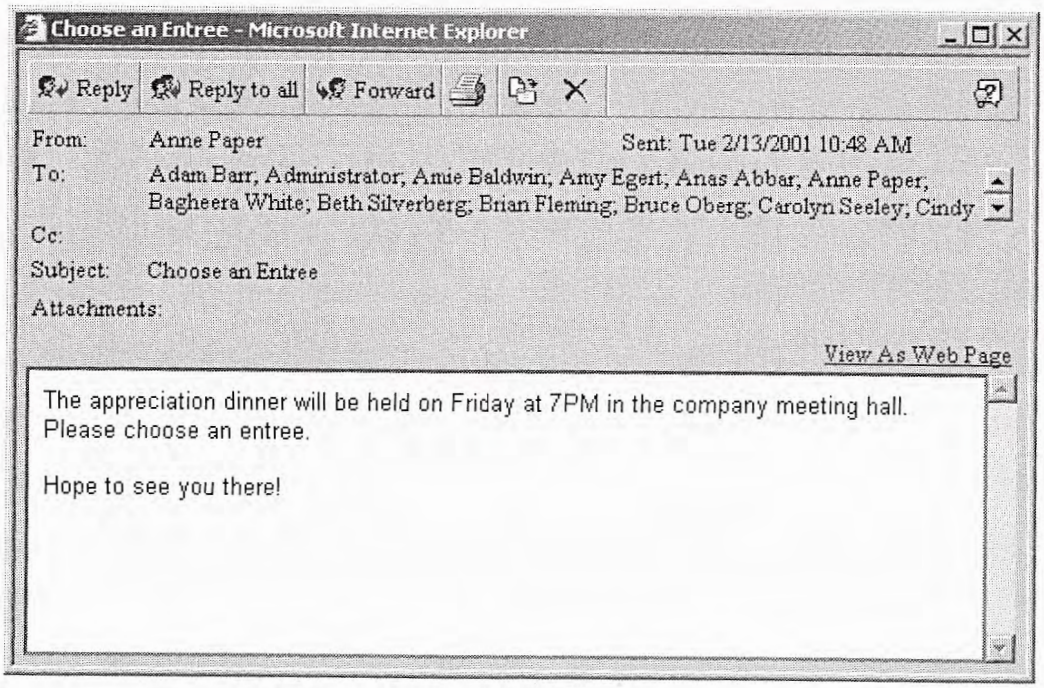


Figure 36-17. OWA displays messages in a separate window.

(Boyce, p.892 ("To read a message, double-click its header to display a window similar to the one shown in Figure 36-17.").) Boyce therefore fully discloses the limitations of claim 14.

5. Claim 15

215. Claim 15 recites:

> 15. The system of claim **11**, wherein the second configurable application is a communications application that displays communications provided by the administrator and communications provided by one or more other users of the system.

('720, 25:22-26 (claim 15).) As explained above, claim 11 is disclosed by and obvious over Boyce in view of Parker. Boyce further discloses, suggests, and renders obvious the limitations of claim 15.

216. I discussed the "communications application" in connection with claims 7 and 8 above. As I explained, the communication application corresponds to a user's OWA inbox web page. The inbox page, as shown below, displays communications provided by both the administrator—i.e., the mailbox owner—and one or more other users of the system:

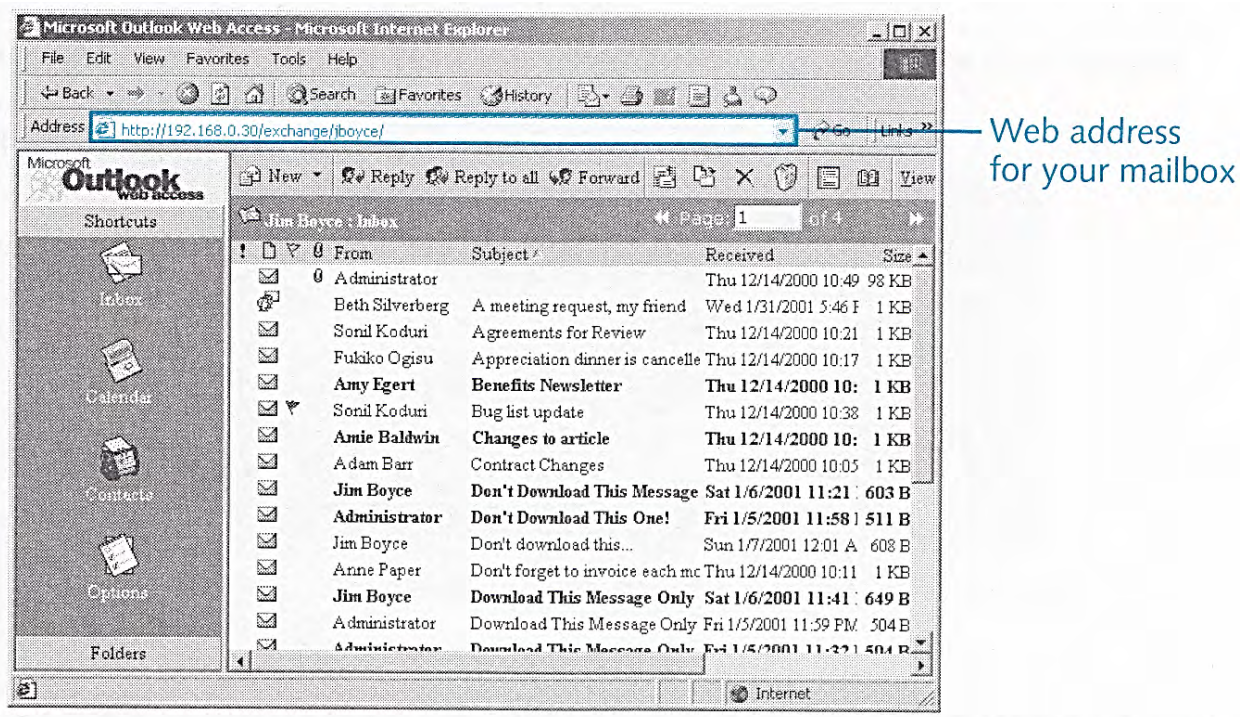


Figure 36-1. Using OWA, you can access your Inbox through a Web browser.

(Boyce, p.872.) In the figure above, the inbox for user "Jim Boyce" includes messages from both that user and from other users. For example, as I discussed above, Boyce teaches that "Amie Baldwin," "Anne Paper," and "Fukiko Ogisu" are users of the system. (Boyce, e.g., pp.123, 176.)

217. In addition to expressly listing messages the mailbox owner in the inbox page, there are at least two other ways in which Boyce teaches and renders obvious that a user's inbox page includes communications from that user: (1) distribution lists; (2) a feature in reply message and the corresponding replied-to messages are displayed in the same page. I addressed both of these in my discussion of claim 11[c] above.

6. Claim 16

218. Claim 16 recites:

> 16. The system of claim **15**, wherein a communication provided by the administrator to the communications application is automatically sent to a plurality of other users of the system.

('720, 25:27-30 (claim 16).) As explained above, claim 15 is disclosed by and obvious over Boyce in view of Parker. Boyce further discloses, suggests and makes obvious the limitations of claim 16.

219. In particular, for claim 15, I discussed various ways that Boyce teaches that a user who is the mailbox owner (i.e., the "**administrator**") provides a communication to the OWA inbox web page (i.e., the "**communications application**"). For example, Boyce suggests and makes obvious that a particular user can send a message to a distribution list that includes that particular user. Boyce discloses the limitations of this claim because Boyce explains that a message addressed to a distribution list will be automatically sent to all users who are members of that list. (Boyce, e.g., p.135 ("Outlook (or Exchange Server) takes care of sending the message to all members of the group.").)

220. Boyce discloses, suggests and renders obvious this limitation in another way as well. I explained for claim 15 that Boyce suggests and makes obvious an option for a particular user's inbox to list both that particular user's

reply messages and the original replied-to messages. (Boyce, p.198.) A reply message from the user corresponds to a "**communication provided by the administrator**." Boyce makes clear that a reply message can be "**automatically sent to a plurality of other users of the system**."

221. In particular, Boyce discloses an "Out of Office" feature. This feature "lets you automatically generate replies to incoming messages when you aren't in the office." (Boyce, p.253 (underlining added).) To use the feature, the user provides a message to be sent as the automatic reply message. (Boyce, p.254 ("Specify the text you want Outlook to use for automatic replies when you're out of the office."); *see also id.*, p.255 (describing steps to set up Out of Office and providing figure showing reply message).) "After the Out of the Office Assistant is set up and functioning, messages that arrive in your Inbox receive an Out of Office response with the message text you've specified." (Boyce, p.254; *see also id.*, p.899-900 (explaining that the Out of Office feature is available through OWA).) Therefore, claim 16 is also disclosed by and obvious over the "Out of Office" feature in combination with obvious the option to display reply messages alongside replied-to messages in the OWA inbox web page as I discussed above for claim 11[c]. (Boyce, p.198.)

7. Claim 17

222. Claim 17 recites:

> 17. The system of claim **16**, wherein a communication provided by the administrator is associated with a start date upon which the communication will be sent to the plurality of other users of the system, the start date being configurable by the administrator.

('720, 25:32-36 (claim 17).) As explained above, claim 16 is disclosed by and obvious over Boyce in view of Parker. Boyce further discloses, suggests, and renders obvious the limitations of claim 17.

223. In particular, Boyce explains that a user can configure a message to be sent at a specified date and time. Boyce explains:

> When a message is sent, it is delivered immediately by default. You can, however, delay message delivery until a specified time. To do so, choose View, Options or click the Options toolbar button to open the Message Options dialog box. Select the Do Not Deliver Before check box and then set the date and time using the drop-down lists. Because delayed sending is a feature of Exchange Server, you can close Outlook as soon as you click the Send button.

(Boyce, p.797 (underlining added).) A figure showing the interface that Boyce describes in the passage above is shown below:

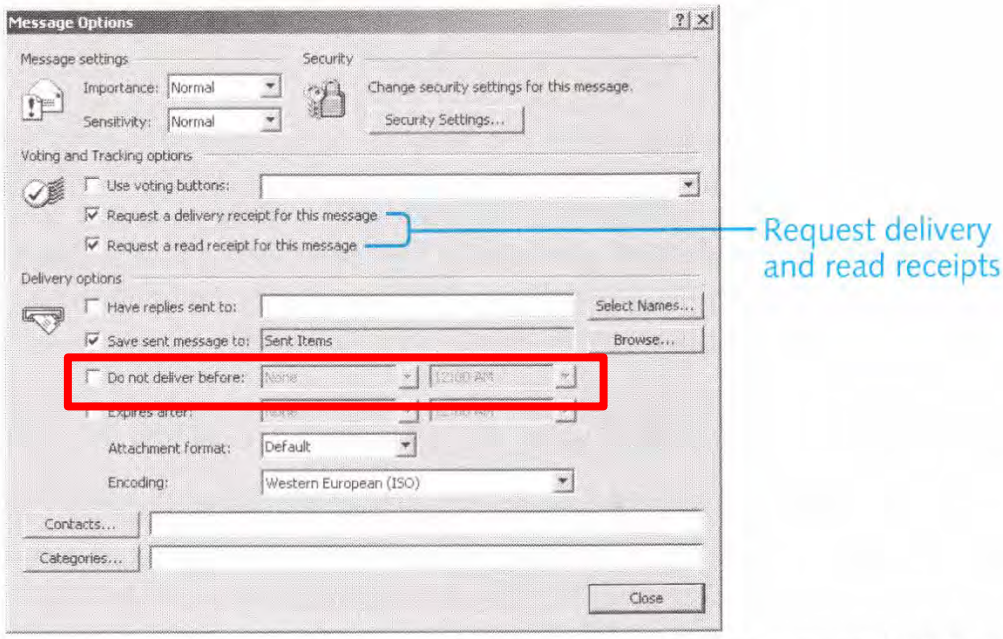


Figure 7-8. Use the Message Options dialog box to request a delivery receipt, a read receipt, or both.

(Boyce, p.183 (red box added).)

224. I note that the claim does not appear to require that the user provide the message with delayed send using the OWA interface. The claim recites "a communication provided by the administrator." However, it would have been obvious to a person of ordinary skill in the art to do provide the message with delayed send. As discussed above, Boyce explains that OWA includes the ability for a user (including the owner of the mailbox (i.e., the "administrator")) to send a message using the OWA interface. Boyce does not expressly disclose that the

delayed send feature is included in the OWA interface, but a person of ordinary skill in the art would have been motivated to include delayed send. As discussed above, Boyce explains that the purpose of OWA is to allow users access to Outlook feature from a web interface when those users might not have access to Outlook software. Including the delayed send feature would have improved functioning of the OWA interface by allowing users to take advantage of an additional useful feature provided in the Outlook software. Moreover, there would have been no technical obstacle in adding this functionality to the OWA interface. In fact, as Boyce notes above, the delayed send feature is managed by the server, not by the Outlook software.

8. Claim 18

225. Claim 18 recites:

> 18. The system of claim **15**, wherein a communication provided by the administrator to the communications application is automatically and selectively sent to other users of the system based at least in part on a business rule that is configurable by the administrator and based on at least one user characteristic that is automatically tracked by the system and which includes information concerning the nature of past use of the system by the other users.

('720, 25:37-44 (claim 18).) As I explained above, claim 15 is disclosed by and obvious over Boyce in view of Parker. Boyce further discloses, suggests, and renders obvious the limitations of claim 18 in at least two ways.

226. The first way that the limitations of claim 18 are disclosed by and obvious over Boyce relates to a "voting" feature described in Boyce. Before turning to my explanation as to why claim 18 is disclosed and obvious, I describe the voting feature.

227. Boyce explains the voting feature:

> Here's how voting works in general: You create a message containing that question or document on which the group will be voting. Next, you add voting buttons to the message. Then you send the message. Recipients cast their vote by clicking the appropriate button. Outlook prompts them to confirm the vote and then sends the reply message back to you.

(Boyce, p.801.) The figure below shows an example of a message with voting buttons added:

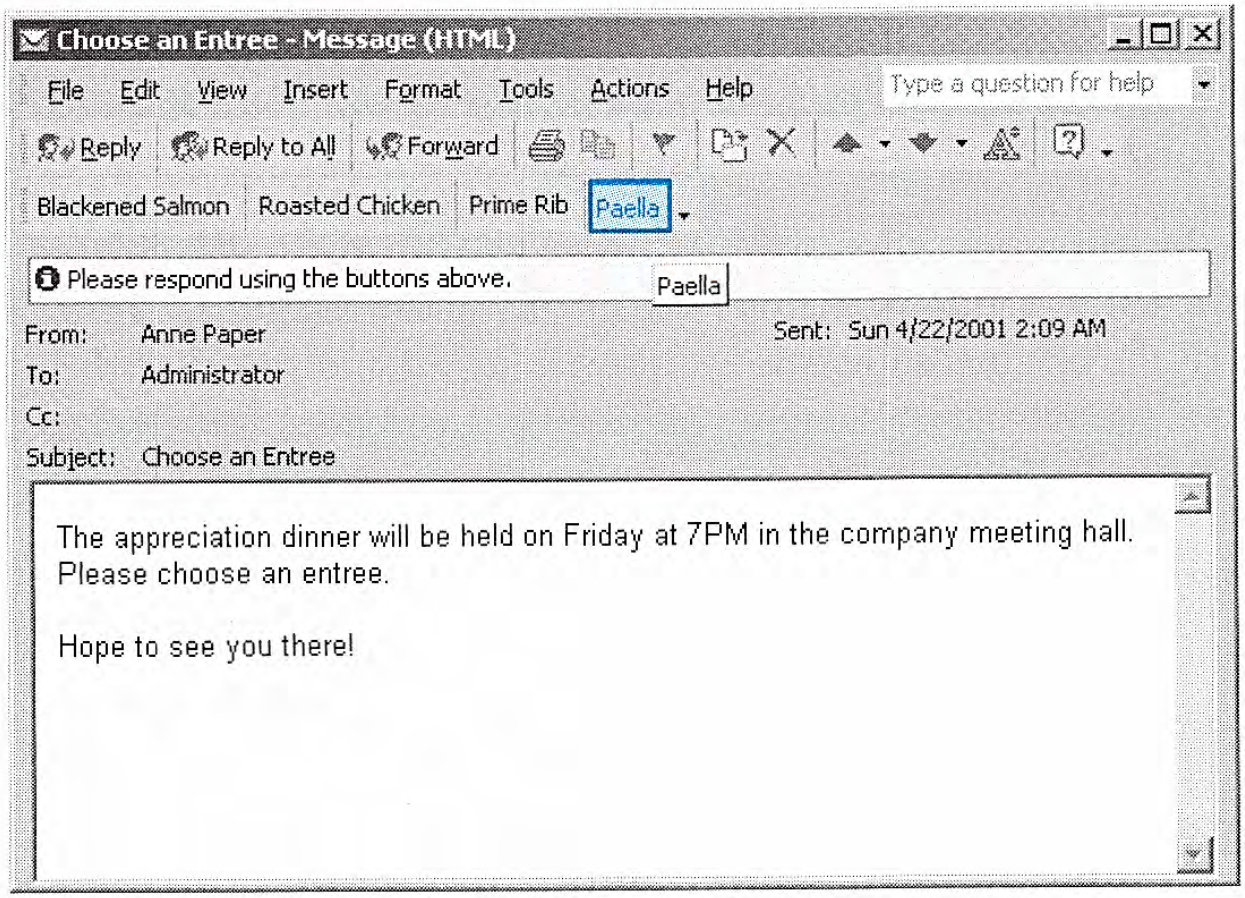


Figure 33-12. Click a button on the message form to vote.

(Boyce, p.803.) As shown in the figure above, the message relates to a company appreciation dinner and has been configured to use the voting feature so that each recipient can choose the entrée they would like—Blackened Salmon, Roasted Chicken, Prime Rib, and Paella. (Boyce, p.802 ("For example, suppose you're planning a company appreciation banquet and need to finalize the menu. You want to give everyone a choice of entree and collect those responses for the caterer.").)

228. Boyce explains that when a recipient makes their selection and sends the reply, Outlook automatically changes the subject line of the message to include their vote. "For example, if the original subject is Choose An Entree and you click the Blackened Salmon button, the subject of the reply returned to the sender is Blackened Salmon: Choose An Entree." (Boyce, p.804.)

229. "Votes come back to you in the form of messages," Boyce explains, and are automatically tracked by the system. (Boyce, pp.804-805.) A "Tracking" tab for the message, shown below, displays a vote summary:

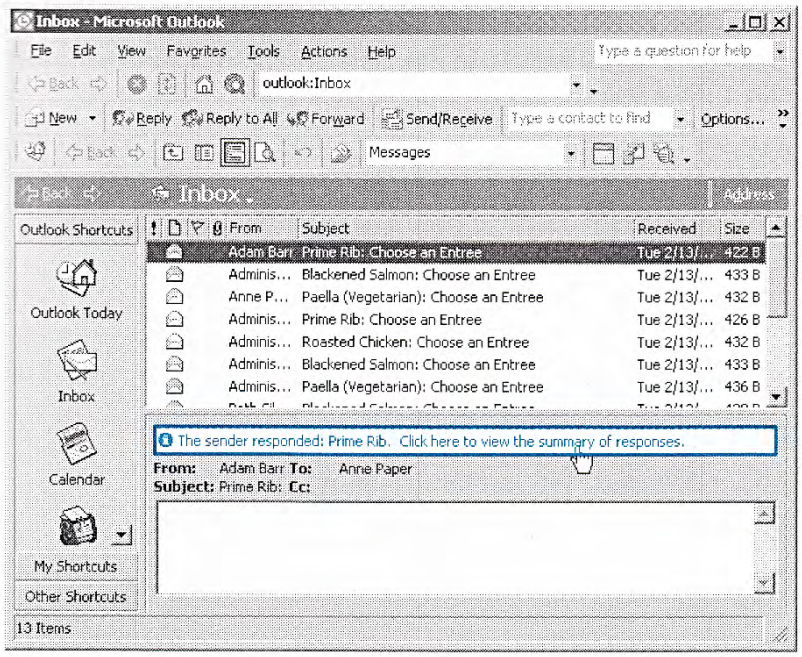


Figure 33-14. Click the summary message in the InfoBar to display the Tracking tab.

(Boyce, p.805.)

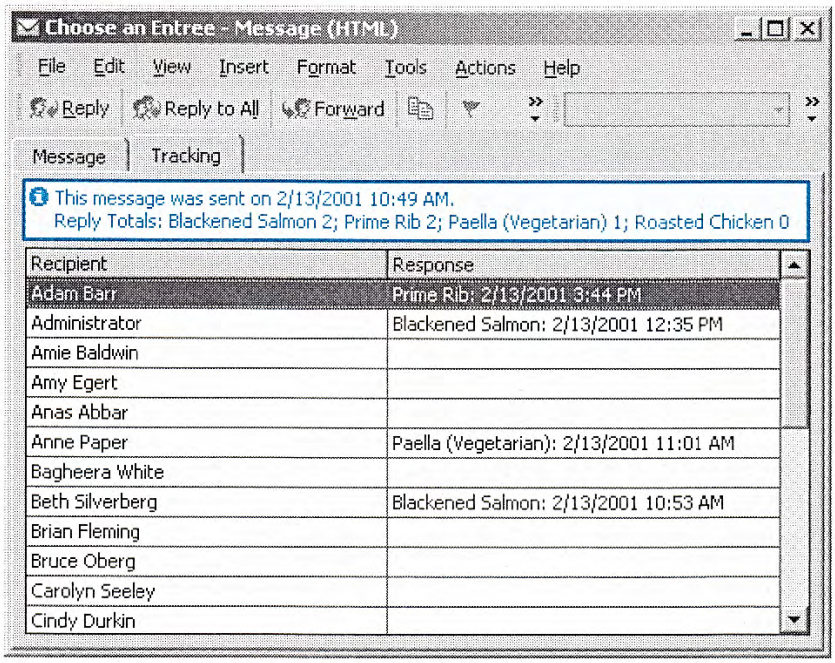


Figure 33-15. Open the message from the Sent Items folder as an alternative way to access the Tracking tab.

(Boyce, p.805.) Boyce explains that "[t]he Tracking tab summarizes the votes, with individual responses displayed one per line. The responses are also totaled in the InfoBar." (Boyce, p.806.)

230. The second way that the limitations of claim 18 are disclosed by and obvious over Boyce relates to a "message rule" feature that I described in connection with claim 11 above. As noted previously, the "message rule" feature allows an administrator to set up a particular rule that performs certain actions depending on the incoming message. "If you receive a lot of messages," Boyce explains, "you might want to have the messages analyzed as they come in, to perform actions on them before you read them." (Boyce, p.231.) One of the tasks

a message rule can perform is to automatically send reply messages to senders of certain messages. (Boyce, e.g., pp.232 ("Reply to . . . individuals" one of "the most common tasks that you might perform with message rules."), 241 ("[P]erhaps the subject line of a particular group of messages always contains a unique string of text, and you want to build a rule around that text.").)

231. It would have been obvious to a person of ordinary skill in the art to configure a "message rule" to automatically reply to vote responses. Such a response could, for example, acknowledge that a vote was received and thank the voter for their input. Any casual user of e-mail recognizes that these sorts of acknowledgement and thank-you messages are common practice. As noted previously, Boyce confirms that "Reply to" tasks are one of the "most common tasks you might perform with message rules." (Boyce, p.232.) A person of ordinary skill in the art would have appreciated that Boyce's example of receiving voting responses for a company appreciation banquet—which could potentially involve a large number of people—would be one such instance in which such a message rule could be beneficially employed. It would have been obvious to a person of ordinary skill in the art to configure a message to send an automatic reply based on the subject line of the vote response because Boyce teaches that messages rules allow automatic replies to be sent based on the subject line of an incoming

message. Therefore, it would have been obvious to a person of ordinary skill in the art to configure a rule to automatically reply to a vote response having the subject "Blackened Salmon: Choose An Entree" with the message, "Thank you. Your request for Blackened Salmon has been received." Where the sender of the original vote message is among the recipients (a foreseeable situation, especially for a company appreciation banquet), the sender would also receive an automated reply after voting.

232. Applying the above scenario to the claim language, the "**communication provided by the administrator to the communications application**" corresponds to the automated message that is sent in reply to vote responses. That message would be provided by the administrator (i.e., the user who sent the original vote message) to the communications application when the administrator (or another authorized user) accessed the administrator's OWA inbox web page (i.e., the "communications application"). That same message would also be "**automatically and selectively sent to other users of the system**." In particular, as explained above, Boyce teaches that a message rule can be configured to automatically send reply messages based on the contents of the message. Therefore, for example, when the administrator and another user vote the same way, each will be sent the same automated reply message. Moreover, the

message would be automatically and selectively sent to other users "**based at least in part on a business rule that is configurable by the administrator**." The claimed business rule corresponds to the message rule configured by the vote message sender (i.e., the administrator) to send an automatic reply based on the content of a message's subject line. For example, all users who voted for "Blackened Salmon" would be sent the same message as a result of the rule configured by the administrator. The message would be automatically and selectively sent "**based on at least one user characteristic that is automatically tracked by the system and which includes information concerning the nature of past use of the system by the other users**." The claimed user characteristic corresponds to a user's particular vote. As I noted above, Boyce explains that votes are automatically tracked and tabulated by the system. The votes also are information concerning "**the nature of past use of the system by other users**" because they reflect the users' use of the system to provide a vote response.

233. The second way that the limitations of claim 18 are disclosed by and obvious over Boyce relates to the "Out of Office" feature described above for claim 16 in combination with the obvious option to display reply messages alongside replied-to messages in the OWA inbox web page.

234. As explained above for claim 16, a user can provide an "Out of Office" message that will be **automatically sent** as a reply message to a message from another user when the "Out of Office" feature is enabled. (Boyce, p.253.) Boyce further makes clear that Out of Office reply messages are **automatically and selectively sent** to other users "based at least in part on a business rule that is configurable by the administrator and based on at least one user characteristic that is automatically tracked by the system and which includes information concerning the nature of past use of the system by the other users."

235. In particular, the "**business rule that is configurable by the administrator**" corresponds in Boyce to the user's option to enable or disable the "Out of Office" feature. (Boyce, p.255 ("Select I Am Currently Out Of The Office and Click OK."); *see also id.*, p.900 (showing OWA interface with same "I'm currently out of the office" option).)

236. The claimed "**user characteristic that is automatically tracked by the system and which includes information concerning the nature of past use of the system by the other users**" corresponds in Boyce to tracking information about users who have sent messages to the user who has enabled the Out of Office feature. Boyce explains that "[t]he Exchange Server keeps track of the send-to list and send the Out Of Office response the first time a message comes from a given

sender. Subsequent messages from that sender are sent to your Inbox without generating an Out Of Office response." (Boyce, p.255 (underlining added).) Therefore, Boyce explains that the Exchange Server automatically tracks information of a user's past use of the system in order to determine whether an automatic Out of Office reply should be sent to a particular sender.

237. The "Out of Office" feature as described by Boyce, in combination with the obvious option to display reply messages alongside replied-to messages in the OWA inbox web page that I discussed above for claim 11[c], therefore discloses, suggests and renders obvious the limitations of claim 18.

9. Claim 19

238. Claim 19 recites:

> 19. The system of claim **15**, wherein a communication provided by the administrator in the communications application is automatically and selectively sent to other users of the system based at least in part on a business rule that is configurable by the administrator and based on at least one user characteristic that is automatically tracked by the system and which includes information concerning an affiliation of a user with certain groups of users on the system.

('720, 25:45-52 (claim 19).) As I explained above, claim 15 is disclosed by and obvious over Boyce in view of Parker. Boyce discloses, suggests, and renders obvious the limitations of claim 19 largely in the same two ways I discussed above

for claim 18: (1) a voting feature in combination with a message rule; and (2) an Out of Office feature in combination with displaying message replies in the same folder as the replied-to messages. Because the language of claims 18 and 19 is materially identical, except for the final clause—in claim 19, the user characteristic "includes information concerning an affiliation of a user with certain groups of users on the system"—I focus my analysis below on that final part of claim 19.

239. The first way that Boyce addresses the limitations of claim 19, as I explained above for claim 18, is that it would have been obvious to a person of ordinary skill in the art for a particular user to configure a message rule to send an automatic reply message to vote responses, and that that particular user could also be the recipient of such an automatic reply. As I explained above for claim 18, users' votes correspond to the "user characteristic that is automatically tracked by the system and which includes information concerning the nature of past use of the system by the other users." As to claim 19, users' votes also correspond to the "user characteristic that is automatically tracked by the system and which includes **information concerning an affiliation of a user with certain groups of other users on the system**." In particular, a user's vote identifies the user as affiliated with the group of users who have been sent a vote message as well as the group of users who have provided a particular response. For instance, using Boyce's

example, a user who voted for Blackened Salmon would be affiliated with the group of users who voted the same way. These groups are reflected in the "Tracking Tab" shown and described by Boyce:

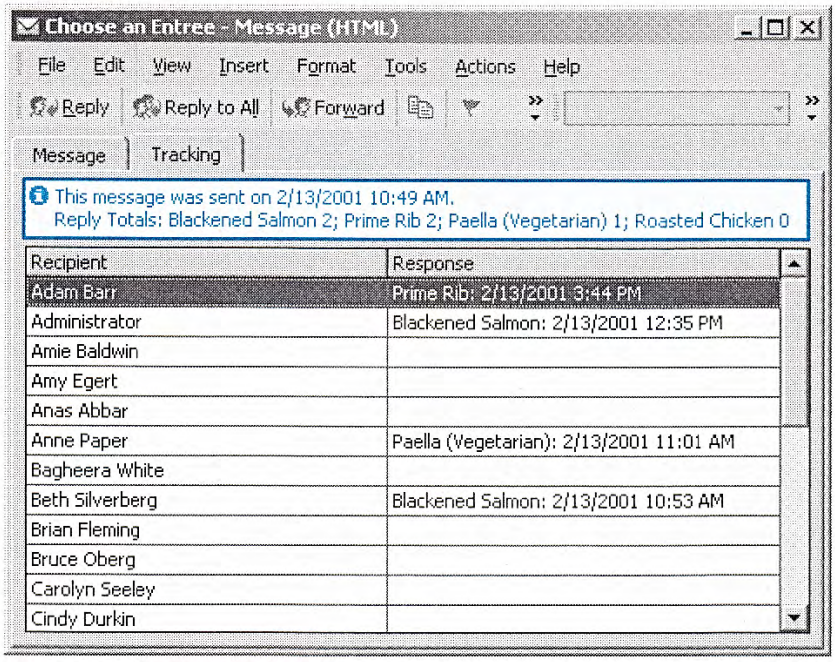


Figure 33-15. Open the message from the Sent Items folder as an alternative way to access the Tracking tab.

(Boyce, p.805.) Boyce explains that "[t]he Tracking tab summarizes the votes, with individual responses displayed one per line. The responses are also totaled in the InfoBar." (Boyce, p.806.) The listing of recipients identifies the group of users who received the vote message, while the reply totals for each vote response reflect the group of users who voted the same way. Therefore, when an automatic reply message is sent based on a user's vote, it is sent based on a "user characteristic that is automatically tracked by the system and which includes

information concerning an affiliation of a user with certain groups of other users on the system."

240. The second way that Boyce addresses the limitations of claim 19, as I explained above for claim 18, is an Out of Office feature that can be enabled or disabled by a user and that automatically and selectively sends reply messages to senders based on whether or not the sender has already been sent an Out of Office reply message.

241. Boyce discloses that the user characteristic that is automatically tracked "**includes information concerning an affiliation of a user with certain groups of users on the system**." As I explained before, the Out of Office feature automatically tracks whether a given sender is among the group of users who have already been sent a reply message, and if so, does not send subsequent reply messages. (Boyce, p.255.) In addition, Boyce also discloses that the Out of Office feature allows a user to condition the sending of a reply message based on a user's inclusion in particular groups.

242. Boyce explains that "[w]ith the Out Of Office Assistant, you can create custom rules to use in addition to the basic automatic reply. To create a custom rule, open the Out Of Office Assistant and click Add Rule to display the Edit Rule dialog box, shown in Figure 8-22":

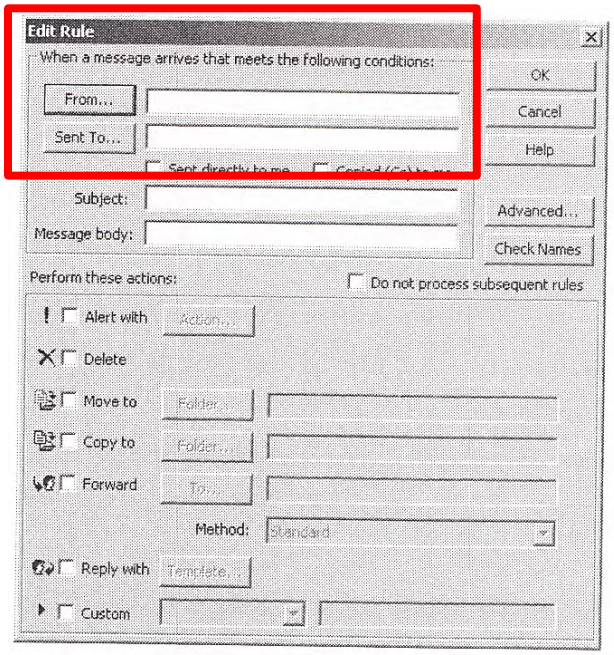
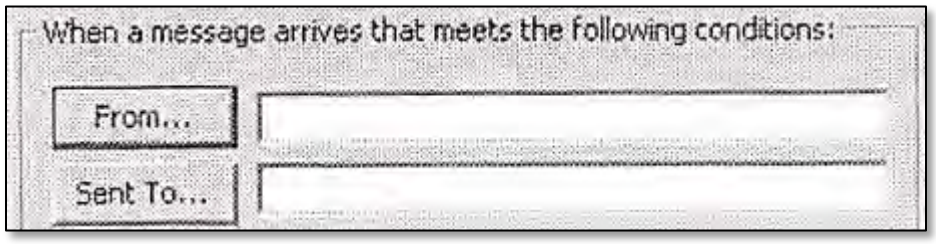


Figure 8-22. You can create custom rules to use with the Out Of Office Assistant.



(Boyce, p.256 (red box added).) As shown in the figure above, the Out Of Office feature allows a user to define two groups of users on which the sending of an automatic reply may be conditioned—a first group in which an incoming message is identified as having come *from* that user, and a second group in which a user is among the recipients that an incoming message was sent *to*.

243. Therefore, the "Out of Office" feature as described by Boyce, in combination with the obvious option to display reply messages alongside replied-

to messages in the OWA inbox web page that I discussed above for claim 11[c], discloses, suggests and renders obvious the limitations of claim 19.

10. Claim 20

244. Claim 20 recites:

> 20. The system of claim **15**, wherein communications provided by users of the system other than the administrator are selectively displayed in the communications application based at least in part on a characteristic of the administrator.

('720, 25:53-56 (claim 20).) As explained above, claim 15 is disclosed by and obvious over Boyce in view of Parker. Boyce further discloses, suggests, and renders obvious the limitations of claim 20 in at least three ways.

245. The first way that Boyce addresses the limitations of claim 20 is Boyce's description of the distribution list feature. As fully discussed previously, Boyce explains that, if a particular user is a member of a distribution list (a "characteristic of the administrator"), the system will automatically and selectively send the message to the mailbox of that user, and it can then be displayed in that user's OWA inbox web page. (Boyce, e.g., p.135.)

246. The second way that Boyce addresses claim 20 is that, as explained previously, a mailbox owner (i.e., "**administrator**") can specify whether delegates have access privileges to view items marked "private." (Boyce, e.g., pp.681-682.)

An administrator's selection of which delegates can view "private" messages qualifies as "**a characteristic of the administrator**." (*See* '720, 7:65-8:3 (describing the term "characteristic").) As explained above for claim 7[a][5], depending on those access privileges, the administrator's OWA inbox web page may or may not display messages received from others marked as "private." Therefore, Boyce discloses and makes obvious that these messages "**are selectively displayed in the communications application based at least in part on a characteristic of the administrator**," as claimed.

247. The third way that Boyce addresses the limitations of claim 20 relates to whether a delegate of a mailbox owner (i.e., "**administrator**") has access privileges to view a *reply* to a message sent by, and *marked private by*, the mailbox owner. As noted previously, a mailbox owner can specify whether a delegate can view inbox messages marked "private." (Boyce, e.g., pp.179, 794 (describing message sensitivity), 681-682 (delegation).)

248. It would have been obvious to a person of ordinary skill in the art that the system would take into account the sender's past designation of a message as "private" in any replies to that message by retaining that designation in those replies. Such a past designation of a message sent by the mailbox owner qualifies as a "**characteristic of the administrator**." (*See* '720, 7:65-8:3 (describing the

term "characteristic" as including "past use of the system").) Boyce does not appear to expressly disclose that a message's "private" designation would be retained in reply messages, but it would have been obvious to a person of ordinary skill in the art. In fact, not doing so would undermine the purpose of allowing a user to mark a message as "private." As is familiar to any user of e-mail, reply messages often include the original message being replied to. A reply message that was not automatically marked "private" could expose the contents of the original "private" message to unwanted users. Therefore, a person of ordinary skill in the art would have been (highly) motivated to configure the system to automatically mark reply messages as "private" based on the "private" designation of the message being replied to. Therefore, because Boyce teaches that a delegate may not have access privileges to view "private" messages, Boyce discloses and makes obvious that these reply messages (i.e., "**communications provided by users of the system other than the administrator**") "**are selectively displayed in the communications application based at least in part on a characteristic of the administrator**," as claimed.

11. Claim 21

249. Claim 21 recites:

> 21. The system of claim **20**, wherein the characteristic of the administrator is the nature of past use of the system by the administrator, which is automatically tracked by the system.

('720, 25:57-59 (claim 21).) As explained above, claim 20 is disclosed by and obvious over Boyce in view of Parker. Boyce further discloses, suggests, and renders obvious the limitations of claim 21 in at least two ways.

250. First, as already explained, Boyce teaches that a user can specify whether delegates have access privileges to view items marked "private" in the user's mailbox. Boyce further makes clear that the system automatically tracks this use of the system in order to determine whether a particular delegate can later view those private items. For example, Boyce does not teach that the system seeks approval from a delegating user whenever a delegate wants to access the user's mailbox. It is common sense that the system would not seek approval, since seeking approval would defeat the purpose of allowing a user to specify delegate access privileges ahead of time.

251. Second, as I explained above for claim 21, it would have been obvious to a person of ordinary skill in the art that the system would automatically track a sender's designation of a message as "private" to ensure that replies to that message were also marked "private."

12. Claim 22

252. Claim 22 recites:

> 22. The system of claim **20**, wherein the characteristic of the administrator is an affiliation of the administrator with certain groups of other users on the system.

('720, 25:60-62 (claim 22).) As explained above, claim 20 is disclosed by and obvious over Boyce in view of Parker. Boyce further discloses, suggests, and renders obvious the limitations of claim 22.

253. As I explained above for claim 20, one way that Boyce discloses the "**characteristic of the administrator**" is Boyce's description of the distribution list feature. A mailbox owner's inclusion in a distribution list is "**an affiliation of the administrator**" with a "**group of other users of the system**." Although Claim 22 requires an affiliation with groups, plural, Boyce makes clear that a user may be associated with *multiple* distribution groups, thereby disclosing and rendering obvious the limitations of claim 22.

254. For example, Boyce offers a "tip" that distribution lists may be nested, such that a member of one distribution list is also a member of a larger distribution list:

> Distribution lists can contain other distribution lists as well as individual addresses. For example, you might create a distribution list

> for each of seven departments and then create on distribution list containing those seven others. You could use this second list when you need to send messages to all seven departments.

(Boyce, p.411; *see also id.*, p.141 (describing feature to list distributions that include a given distribution list).) Therefore, because Boyce explains that the system selectively sends messages addressed to a distribution list to the members of the list, a mailbox owner's inclusion in two distribution lists discloses and suggests the limitations of claim 22.

13. Claim 23

255. Claim 23 recites:

> 23. The system of claim **20**, wherein at least one of the communications provided by a user of the system other than the administrator is a product promotion communication.

('720, 25:63-65 (claim 23).) As explained above, claim 20 is disclosed by and obvious over Boyce in view of Parker. Boyce further discloses, suggests, and renders obvious the limitations of claim 23.

256. A user receiving a "product promotion communication" is a natural and foreseeable use of an e-mail system, as any e-mail user knows. Boyce in particular states that "you might want all members of the sales department to be able to broadcast messages to customers about promotions." (Boyce, p.685 (underlining added).) Boyce further discusses receiving messages about "a product

. . . you're selling." (Boyce, p.258 (underlining added).) It would have been obvious to a person of ordinary skill in the art that members of the sales department likely exchanged messages related to the customer message, such as exchanged drafts. Those messages would clearly be "product promotion communications." Therefore, Boyce discloses and suggests the limitations of claim 23.

14. Claim 24

257. Claim 24 recites:

> 24. The system of claim **15**, wherein at least one of the communications is associated with a configurable start date upon which the communication will become visible in the communications application, the start date being configurable by the administrator.

('720, 25:66-26:3 (claim 24).) As explained above, claim 15 is disclosed by and obvious over Boyce in view of Parker. Boyce further discloses, suggests, and renders obvious the limitations of claim 24.

258. Claim 24 is similar to claim 17 in that they both recite a "configurable" "start date" associated with a communication. However, Claim 24 additionally recites that the start date identify when the communication "will become visible in the communications application" as opposed to when the communication will be sent to other users, as required by claim 17.

259. Boyce discloses and renders obvious the limitations of claim 24, which reflects a situation where a user sends a delayed message to a distribution list that includes that user. I have already discussed the delayed send and distribution list features. As previously explained, Boyce makes clear that a user who is a member of and sends a message to a distribution list will receive that message (which will be displayed in that user's OWA inbox web page). Applying the delayed send feature to such a message is a straightforward and predictable use of the system. For example, a user who is a member of the sales department and who is going on vacation may wish to configure a reminder message to be automatically sent to the sales distribution list the day before the vacationing user leaves the office. Therefore, the limitations of claim 24 are obvious to a person of ordinary skill in the art over the teachings of Boyce.

15. Claim 25

260. Claim 25 recites:

> 25. The system of claim **15**, wherein at least one of the communications is associated with a configurable end date upon which the communication is no longer visible in the communications application, the end date being configurable by the administrator.

('720, 26:4-8 (claim 25).) As explained above, claim 15 is disclosed by and obvious over Boyce in view of Parker. Boyce further discloses, suggests, and renders obvious the limitations of claim 25.

261. Boyce discloses the limitations of claim 25 in at least two ways. First, Boyce describes a feature in which a user can configure an "AutoArchive" feature to delete messages from their inbox after a specified period of time. Second, Boyce describes a feature where a user can configure a message to "expire" such that it will be removed from the recipient's mailbox at a specified date and time. This expiration feature, in combination with a user sending a message to a distribution list that includes that user, also discloses claim 25.

262. As to the "AutoArchive" feature, Boyce explains that "you might want to delete old items after a specific date (say, after a message sits in the Inbox for six months)." (Boyce, p.716.) Boyce explains that how to configure the "AutoArchive" feature:

> In your message folders, AutoArchive can delete messages if they are older than a specified amount of time. To set this option, open the AutoArchive dialog box for a message folder and select the Delete Expired Items option. Also make sure that the Archive or Delete Old Items option is selected.

> In the Default Folder Settings For Archiving area, set the amount of time you want to pass before AutoArchive automatically deletes e-mail messages.

(Boyce, p.717.) The interface described in the passage above is shown in the figure below:

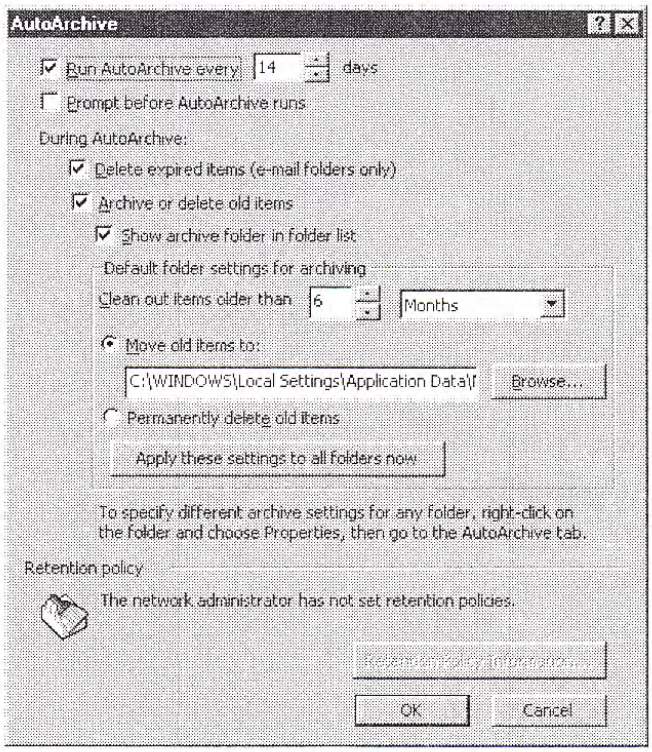


Figure 28-17. Set up Outlook to run AutoArchive at specified intervals.

(Boyce, p.717.)

263. Another way in which Boyce discloses claim 25 is a message expiration feature used in combination with a message sent to a distribution list that includes the sender.

264. Boyce describes in the message expiration feature:

> Just as you can delay the delivery of a message, you can also set a message to expire. The message expires and is removed from the recipient's mailbox after a specified period of time whether or not it has been read. You might want to have a message expire if its contents become stale after a certain amount of time or if you want to ensure that the message is deleted. To set this option, open the Message Options dialog box, select Expires After, and then set a date and time. The message will no longer be available to the recipient after that time.

(Boyce, pp.797-98.) The interface for setting message expiration described above in shown in the figure below:

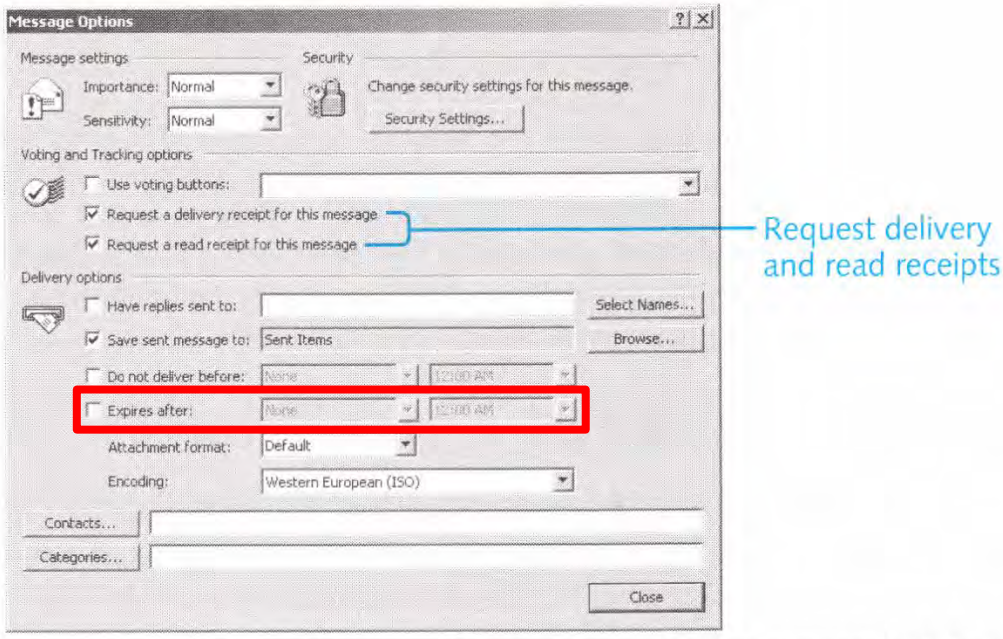


Figure 7-8. Use the Message Options dialog box to request a delivery receipt, a read receipt, or both.

(Boyce, p.183 (red box added).)

265. I have already described Boyce's teachings regarding the operation of distribution lists. (Boyce, e.g., p.135.) Using the message expiration feature for a message sent to a distribution list that included the sender is a straightforward and predictable use of the system. For example, a user in a sales department may send a list of sale prices available for a limited time to the sales distribution list. To avoid future confusion with other sales, the sender could configure the message to expire when the sale ends. This is an application of Boyce's teaching that "You might want to have a message expire if its contents become stale after a certain amount of time or if you want to ensure that the message is deleted." (Boyce, pp.797-98.)

266. The limitations of claim 25 are therefore disclosed by and obvious over Boyce.

16. Claim 26

267. Claim 26 depends from claim 15, which is disclosed by and obvious over Boyce in view of Parker. Claim 26 recites substantially similar limitations as claim 8 regarding an "events application" and "communications related to events

scheduled in the events application." A table setting for a claim listing for claim 26 and claim 8 is below, with identical language underlined.

Claim 26	Claim 8
26. The system of claim **15**, further comprising an events application that schedules and displays events based at least in part on inputs received from the administrator, and wherein communications related to events scheduled in the events application are automatically displayed in the communications application.	8. The method of claim **7**, wherein: one of the configurable applications is an events application that schedules and displays events based at least in part on inputs received from one of the users of the system; one of the configurable applications is a communications application that displays communications received from multiple users of the system; and further comprising the step of automatically displaying communications related to events scheduled in the events application in the communications application.

268. As shown in the table above, claim 8 includes all of the limitations of claim 26, except that claim 8 recites "inputs received from one of the users of the system," while claim 26 recites "input received from the administrator." This is not a meaningful difference based on my mapping of Boyce to the claims because the "user of the system" that I identified for claim 8 is the user who owns the mailbox and can configure their mailbox using, among other things, the delegation interface—i.e., the administrator.

17. Claim 27

269. Claim 27 recites:

> 27. The system of claim **26**, wherein communications related to events scheduled in the events application are automatically transmitted to a group of other users of the system whose members are selected by the administrator.

('720, 26:16-19 (claim 27).) As explained above, claim 26 is disclosed by and obvious over Boyce in view of Parker. Boyce further discloses, suggests, and renders obvious the limitations of claim 27.

270. Boyce explains that meeting invitation messages are automatically sent to attendees selected by the meeting organizer. (Boyce, p.526 ("When you click the Send button on a meeting form, a meeting request e-mail message is sent to the invited attendees.").) Moreover, it would be obvious to a person of ordinary skill in the art to specify a distribution list as the attendees for a meeting. This would be a straightforward and predictable use of the system. Boyce explains that "[y]ou can use distribution lists in messages, tasks requests, and meeting requests." (Boyce, p.411 (underlining added).) For example, the head of a sales department might want to organize a meeting with the entire sales department. Boyce makes clear that it would be obvious for the head of sales to specify the sales distribution group to avoid the "real chore" of specifying individual recipients. (Boyce, p.135.) Boyce further teaches that the system takes care of automatically transmitting the

message to the individual members of the group. (Boyce, p.135.) The limitations of claim 27 are therefore disclosed and obvious over Boyce.

18. Claim 28

271. As shown in the table below, claim 28 and claim 12 are identical except that claim 12 recites "the computer" while claim 28 recites "the computing device."

Claim 28	Claim 12
28. The system of claim **11**, wherein the application link is generated by the computing device based at least in part on the first and/or the second configurable business rule.	12. The system of claim **11**, wherein the application link is generated by the computer based at least in part on the first and/or the second configurable business rule.

272. Because independent claim 11, from which claim 28 depends, recites only a "computer" and no "computing device," the proper antecedent basis for this term is the "computer." Therefore, for the reasons explained above for claim 12, claim 28 is disclosed by and obvious over Boyce in view of Parker.

19. Claim 29

273. Claim 29 depends from claim 11, which is disclosed by and obvious over Boyce in view of Parker as explained above. Claim 29 is substantially the same as claim 9, as shown in the claim listing below for those claims, with identical language highlighted:

Claim 29	Claim 9
29. The system of claim **11**, wherein the user profiles include information associating a user with a group of users that is less than all users of the system, and wherein the first business rule determines what content can be seen by which users based at least in part on whether users are associated with a particular group.	9. The method of claim **7**, wherein the user profiles may include information associating a user with a subgroup of all users of the web site and wherein a rule determines what content can be seen by which users based at least in part on whether users are associated with a particular subgroup.

274. As shown in the table above, claim 29 recites "associating a user with a group of users that is less than all users of the system" while claim 9 recites "associating a user with a subgroup of all users of the web site." I can discern no meaningful difference in these limitations. As I explained above, Boyce teaches that "users of the system" and "users of the web site" are the same. (Boyce, e.g., p.885 (explaining that OWA is enabled for all users by default).)

275. Claim 29 also recites "the first business rule," while claim 9 recites only "a rule." This difference is also not meaningful because I identified the same disclosures of Boyce as disclosing the "rule" of claim 9 and the "first business rule" of claim 29—i.e., delegation rule regarding whether a delegate can view the delegating user's content that has been marked "private."

20. Claim 30

276. Claim 30 recites:

> 30. The system of claim 11, further comprising an administrator portal configured to enable the administrator to configure the first and second business rules.

('720, 26:29-31 (claim 30).) As explained above, claim 11 is disclosed by and obvious over Boyce in view of Parker. Boyce further discloses, suggests, and renders obvious the limitations of claim 30.

277. In particular, as explained for claim 11, the "first and second business rules" correspond to delegation rules. As I explained for claim 7[a][2], these rules are configurable using the delegation interface, which qualifies as the claimed "administrator portal." Therefore, claim 30 is disclosed by and obvious over Boyce in view of Parker.

F. Claims 1 and 31

1. Claim 1

278. Generally speaking, claim 1 is directed to functionality that substantially overlaps with claim 7 but in part uses slightly different language. For many of the same reasons discussed above from claim 7, claim 1 is disclosed by and obvious over Boyce and Parker. Because of the substantial overlap between claim 1 and claim 7, I will address each limitation of claim 1 only briefly.

(a) "A system, including a computer, for managing content displayed on a web site, comprising:" (Claim 1[p])

279. As to the preamble of claim 1, for the reasons discussed above for claim 7, Boyce discloses a "**system, including a computer, for managing content displayed on a web site**." In particular Boyce discloses a system comprising one or more computers running Exchange Server software, Outlook software, and web browser software that allow a user to manage content—such as e-mail messages, calendar items, and contacts—and display that content on a website. (Boyce, e.g., pp.872, 873, 874-875, 876-877.)

(b) "a plurality of configurable applications administered by the computer, wherein each configurable application includes a category of content stored by the computer and displayable to users of the web site, and wherein one of the applications is a biography application comprising biographical information about users of the web site;" (Claim 1[a])

280. Boyce also discloses the "**plurality of configurable applications**" as claimed. The configurable applications correspond in Boyce to OWA inbox, contacts, and calendar web pages, as explained for claim 7[a][1] above. They are "**administered by the computer**," because as explained above, the computer generates the web pages and stores and manages the content (e.g., e-mail messages) used to generate the pages. (Boyce, e.g., pp.22, 49, 790, 872-873, 875, 876-877, 890, 894.) In addition, "**each configurable application includes a**

category of content stored by the computer and displayable to users of the web site." As explained above, Boyce discloses that content—e-mail messages, calendar items, and contact items—is categorized into particular folders, and each web page displays a particular type, or category. (Boyce, e.g., p.58 ("**Calendar** This folder contains your schedule, including appointments, meetings and events. **Contacts** This folder stores information about people . . . . **Inbox** Outlook deliver your e-mail to this folder." (bold in original)).) For example, the calendar web page displays calendar items.

281. Boyce also discloses "**one of the applications is a biography application comprising biographical information about users of the web site**." As discussed above, the "biography application" corresponds to a user's OWA contacts web page or, alternatively, their calendar web page. Both web pages include biographical information, for reasons already discussed for claim 7[a][1]. In addition, Boyce discloses that the biographical information is about **users of the web site**. As noted above, Boyce explains that OWA is enabled by default for each user who has an Exchange mailbox by default. And the contacts web page, as explained above, includes multiple users of the system who have Exchange mailboxes, such as "Amie Baldwin" and "Anne Paper." Therefore, these two individuals, at least, qualify as "users of the web site." As to the calendar web

page, as discussed previously, Boyce explains that a calendar item can be a meeting involving multiple individuals. These individuals can include "users of the web site" for the same reasons discussed above for the contacts web page.

(c) "wherein at least one of the plurality of configurable applications is generated by the computer at least in part based on inputs received from users of the web site, the inputs including at least one of text, graphics, sounds, documents, and multi-media content;" (Claim 1[b])

282. Boyce further discloses that "at least one of the plurality of configurable applications is generated by the computer at least in part based on inputs received from users of the web site, the inputs including at least one of text, graphics, sounds, documents, and multi-media content." Like claim 7, this configurable application corresponds to a user's OWA inbox web page. The web page, as explained already, is generated by the server computer. As already explained, the inbox includes inputs received from users of the web site. For example, as discussed above, the inbox web page for Jim Boyce includes messages from individuals including "Anne Paper" and "Fukiko Ogisu." As discussed previously, Boyce explains that these users have Exchange mailboxes and further explains that OWA is enabled for every Exchange mailbox by default. (Boyce, e.g., pp.123, 176 (discussing Global Address List), 885 (OWA enabled by default for all users).)

(d) "at least one application link displayed on the web site that points to at least one of the plurality of configurable applications;" (Claim 1[c])

283. For the same reasons discussed above regarding the "configurable link" recited in claim 7, Boyce discloses "at least one application link displayed on the web site that points to at least one of the plurality of configurable applications." As I discussed above, the broadest reasonable construction of "application link" is the same as that for "configurable link." Therefore, the application link corresponds to any of the clickable icons for a user to access inbox, contacts or calendar web pages, which are displayed on a user's OWA web site.

(e) "wherein the at least one application link is generated by the computer based at least in part on a user-configured business rule that applies profile information to designate to which configurable application the generated application link points; and" (Claim 1[d])

284. As to claim 1[d], Boyce further discloses the "**application link is generated by the computer**." As discussed above, Boyce explains that the OWA web pages are generated by the server in response to a request from the client. (Boyce, pp.875, 894.)

285. Boyce and Parker also disclose that the application link is generated "**based at least in part on a user-configured business rule that applies profile information to designate to which configurable application the generated**

application link points." The "user-configured business rule" corresponds to the rule specified by a delegating user regarding whether a particular delegate has "Folder Visible" privileges. As discussed for claim 7 above, Boyce and Parker teach that the system uses the profile information of the delegating user to determine whether a clickable icon is displayed that points to a particular associated OWA web page. For example, Boyce and Parker teach that if a delegate does not have "Folder Visible" privileges for the delegating user's inbox, the clickable icon for the inbox will not be included in the OWA display.

286. I note that the limitation states that the rule applies profile information "**to designate to which configurable application the generated application link points**." Boyce discloses and renders obvious this limitation because, as I explained above for claim 3, Boyce teaches that a clickable icon includes a URL that includes the account name of the mailbox owner. For example, Boyce teaches and makes obvious the clickable icon for Jim Boyce's inbox web page includes the URL <http://192.168.0.30/exchange/jboyce/Inbox/>, where "jboyce" is account name for user Jim Boyce. Therefore, because the URL includes profile information—i.e., the mailbox owner's account name (such as "jboyce")—the application of the "Folder Visible" rule to include a particular clickable icon in the OWA display involves applying profile information to designate to which

configurable application—e.g., the OWA inbox page of user Jim Boyce—the clickable icon points.

(f) "wherein at least some displayable content is generated by the computer based at least in part on a further user-configured business rule that manages displayable content for the configurable application to which the generated application link points, by selecting from among the content stored by the computer before the displayable content generated by the computer is sent in response to a user activating the generated application link." (Claim 1[e])

287. As to the last limitation of claim 1, while it consists of more verbose language that claim 7[a][5], Boyce discloses this limitation for the same reasons discussed for that claim. As discussed above, Boyce discloses that a delegating user can configure whether that user's "private" items are displayed to a given delegate. As I have discussed above, Boyce further discloses that the OWA web pages are generated by the server in response to a request from the client.

2. Claim 31

288. As shown in the claim listing below, claim 31 is nearly identical to claim 1:

Claim 31	Claim 1
31. A system, including a computer, for managing content displayed on a web site, comprising:	1. A system, including a computer, for managing content displayed on a web site, comprising:
a plurality of configurable applications	a plurality of configurable applications

Claim 31	Claim 1
administered by the computer, wherein each configurable application includes a category of content stored by the computer and displayable to users of the web site, and wherein one of the applications is a biography application comprising biographical information about users of the web site;	administered by the computer, wherein each configurable application includes a category of content stored by the computer and displayable to users of the web site, and wherein one of the applications is a biography application comprising biographical information about users of the web site;
wherein at least one of the plurality of configurable applications is generated by the computer at least in part based on inputs received from users of the web site, the inputs including at least one of text, graphics, sounds, documents, and multi-media content;	wherein at least one of the plurality of configurable applications is generated by the computer at least in part based on inputs received from users of the web site, the inputs including at least one of text, graphics, sounds, documents, and multi-media content;
at least one application link displayed on the web site that points to at least one of the plurality of configurable applications;	at least one application link displayed on the web site that points to at least one of the plurality of configurable applications;
wherein the at least one application link is generated by the computer based at least in part on a user-configured business rule that applies profile information to designate to which configurable application the generated application link points; and	wherein the at least one application link is generated by the computer based at least in part on a user-configured business rule that applies profile information to designate to which configurable application the generated application link points; and
wherein at least some displayable content is generated by the computer based at least in part on a further user-configured business rule that manages displayable content for the configurable application to which the generated application link points, by selecting from among the content stored by the computer before the displayable content	wherein at least some displayable content is generated by the computer based at least in part on a further user-configured business rule that manages displayable content for the configurable application to which the generated application link points, by selecting from among the content stored by the computer before the displayable content

Claim 31	Claim 1
generated by the computer is sent in response to a user activating the generated application link, and	generated by the computer is sent in response to a user activating the generated application link.
wherein said at least some displayable content is stored by the computer in association with a user-configured start date, and wherein the computer applies a further business rule, at the time the user activates the generated application link, that causes the display of content to be suppressed based on said associated user-configured start date.	

289. As the table above shows, claim 31 differs from claim 1 only by additionally reciting in the last limitation "wherein said at least some displayable content is stored by the computer in association with a user-configured start date, and wherein the computer applies a further business rule, at the time the user activates the generated application link, that causes the display of content to be suppressed based on said associated user-configured start date."

290. For many of the same reasons discussed above for claim 1, Boyce and Parker also disclose and render obvious claim 31. However, for the last three limitations of claim 1 related to the "application link," I focused on the clickable icon pointing to a user's OWA inbox web page. For claim 31, the application link as claimed corresponds to the clickable icon for a user's OWA calendar web page.

291. I have already explained for claim 1 above that the clickable icon included on the OWA display that points to the OWA calendar web page qualifies as the claimed "application link." Also, Boyce and Parker disclose and render obvious that the clickable icon for a calendar page would be generated based on a rule that applies the mailbox owner's profile information for the same reasons explained above for the clickable icon for the inbox page—i.e., if the mailbox owner has configured the accessing user to have "Folder Visible" access privileges for the calendar, the corresponding clickable icon would include a URL generated by applying the mailbox owner's account name. Boyce further teaches, as I have already discussed, that when the icon for the calendar is clicked, the contents of the OWA calendar web page would depend on whether the mailbox owner has configured the accessing user to have the right to view content marked as "private."

292. For the last limitation of claim 31, the application of Boyce to this limitation is straightforward. Events in a calendar plainly have an associated user-configured start date. (Boyce, e.g., p.487 (Figure 18-9 showing fields for a user to specify a start time and date for a calendar item), p.488 ("You set the start and end times of the appointment by typing the date and time in the Start Time and End Time boxes or by clicking the drop-down arrows beside each box.").)

293. Boyce teaches that the OWA calendar web page can display events by day, week or month. (Boyce, p.897.) For example, if the calendar page is configured to display events the current month, the page will suppress the display of events not scheduled to start for another two months. Because, as already explained, the server generates pages in response to user requests, the determination as to whether to include a particular event will be made when the user selects the clickable calendar icon to request the OWA calendar web page.

294. Claim 31 is therefore disclosed by and obvious over Boyce and Parker.

V. GENERAL COMBINABILITY OF OUTLOOK FEATURES WITH OUTLOOK WEB ACCESS

295. Throughout this Declaration, I have identified various ways in which it would have been obvious to a person of ordinary skill in the art to incorporate or adapt features from Outlook software into Outlook Web Access, to the extent there is any question that Boyce discloses such features in Outlook Web Access.

296. More generally, it is my opinion that it would have been obvious to a person of ordinary skill in the art to incorporate or adapt *any* feature of Outlook software that I have discussed into Outlook Web Access. Doing so would have entailed the combination of existing features according to their established functionality and would have had predictably results. A person of ordinary skill in

the art would have been motivated to make any such combination in order to improve OWA by including additional useful functionality already present in the Outlook software. Doing so would enable users who did not have access to their Outlook software to be able to take more full advantage of all of the features that Outlook and Exchange Server offer. As noted above, providing such "roaming" access to Outlook users is one purpose of OWA. (Boyce, p.872 (OWA "is useful for roaming users who want to access the most common mailbox features when they don't have access to their personal Outlook installation.").) In my opinion, therefore, a person of ordinary skill in the art would have had ample motivation to adapt and improve OWA by adding to it any of the Outlook software features that I have described in this Declaration.

VI. ENABLEMENT OF THE PRIOR ART

297. I am informed that in an *inter partes* review, the petitioning party does not have a burden to show that the prior art is enabling. Nevertheless, in my opinion, the Boyce and Parker references provide sufficient detail to enable a person of ordinary skill in the art to practice the limitations of the claims to which they apply without undue experimentation. The technological underpinnings of the challenged '720 patent claims were in place well before February 2003. The '720 patent itself provides little to no disclosure regarding how a person of ordinary skill

in the art might actually go about implementing the claim system and methods, an implicit acknowledgement that various implementations would be readily apparent to a person of ordinary skill. In fact, Boyce shows that commercially-available systems incorporating the relevant technologies had already existed for years before February 2003 and that documentation regarding their functionality and operation widely available. (Boyce, e.g., pp.1104-05 (identifying various troubleshooting and support resources, including web sites and books).) A person of ordinary skill in the art would not have required disclosures any more detailed than the disclosures in the prior art to apply the prior art teachings in the manner described in this Declaration.

VII. CONCLUSION

298. In signing this Declaration, I recognize that the Declaration will be filed as evidence in a contested case before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I also recognize that I may be subject to cross-examination in this proceeding. If required, I will appear for cross-examination at the appropriate time. I reserve the right to offer opinions relevant to the invalidity of the ’720 patent claims at issue and/or offer testimony in support of this Declaration. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are

believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001.

Dated: September 30, 2016

Respectfully submitted,

David Klausner

David Klausner
Redwood City, California

EXHIBIT A

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EXPERTISE

Computer Networking, Security, Applications, and Software Expert.

More than 45 years of employment and consulting experience in many aspects of computers, from micros to mainframes, from programming to management.

Operating Systems Experience

Microsoft Windows – all versions, Linux (various distributions, e.g., CentOS, Ubuntu, Fedora, etc.), VMWare Workstation and vSphere, VirtualBox, VMPC, Mac OSX, OS/2, UNIX (various), RTE, MS/DOS, TSO, MVS, VM, JES2, DOS/VSE, WYLBUR, PC/DOS, Amiga DOS, XT/370, RTOS, VMS, and system generations (SYSGENs).

Hardware

PCs and compatibles (Pentiums, etc), Apple products, Network Devices, Hardware Internals, Workstations (Apollo, HP, Sun), HP 1000, HP 2100, HP 150, DEC PDP family, IBM 8100, IBM S/23, M68000s series. IBM Mainframes and compatibles.

Software Applications, Packages and Libraries

Databases, Web/internet applications, Networking, Sniffers, PC software (Microsoft, etc), X-Windows X11R4 and 3, MOTIF, IMAGE, FrameMaker, Clipper, FoxBase, Q&A, SAS, VSAM, ISPF, KEDIT, XEDIT, VTAM, Revelation, Knowledgeman, and many more.

Software Development

Algorithms, databases, user interfaces, quality assurance and testing, real-time applications, artificial intelligence, utility programs, diagnostics, mainframe DOS B-transients, machine simulators, performance analyzers, EDI applications, general ledger, inventory control, software auditing, manufacturing process, statistical process control, and report writing.

Languages

C#, C++, C, Java, Assembler (various), COBOL, FORTRAN, BASIC, PL/I, PLS, REXX, EXEC2, JCL, machine languages, more.

EDUCATION:

M.S.E.E. Polytechnic Institute of Brooklyn, N.Y.
B.A. Mathematics Brooklyn College, N.Y.

EMPLOYMENT HISTORY:

Teaching and Speaking Engagements

Lecturer in Mathematics, Computer Programming, City University of New York, Brooklyn College, Brooklyn, New York.
Invited speaker in Virtual Systems, IBM, Poughkeepsie, New York.
Invited speaker, AT&T, San Francisco Bay Area.
Invited participant expert witness, American Bar Association, Mock Trial, Honorable Judge James Ware, San Francisco, CA, for Morgan Chu, Irell and Manella, Los Angeles, CA..
Invited participant expert witness, California State Bar Association, Mock Trial, Honorable Judge James Ware, Newport Beach, CA, for Fish and Richardson, San Francisco, CA.
Lecturer in Public Speaking, Golden Gate University, Los Altos, CA.
Invited panelist regarding litigation of copyright and trade secrets, Practicing Law Institute, continuing legal education, San Francisco, CA.
Guest Lecturer in Computer Science, Computers and the Law, Stanford University, Stanford / Palo Alto, CA.

Various Consultations San Francisco Bay Area; Los Angeles; New York; Boston; Dallas; Washington, D.C.; Miami, Florida; San Juan; Melbourne, Australia, Quebec, etc.

04/93 - present -- Consultant

Consulting on a wide variety of PC, workstation and mainframe matters. Expertise in reverse engineering, algorithms. internet, data security, forensics, software activation, packet switching/ routing, licensing software, network software updating, etc.

INTEL Corp., Santa Clara, CA

08/91 - 04/93 -- Contract Consultant

Wrote a program to process spreadsheet to replace Excel. Created secure windowing sales tracking and quoting system Banyan-networked on PCs. Designed, developed and tested the Object-oriented system using Clipper. Wrote windowing library to popup/down grow/shrink windows on-screen. Interfaced PCs to Mainframes and EDI programs.

WIP Technology, Sunnyvale, CA

04/91 - 04/93 -- Contract Consultant

Created windowing Return-Merchandise-Authorization system Novell-networked on PCs. Designed, developed and tested the Object-oriented system using Clipper. Created window management software for ease of use and appearance.

Various short term contracts

01/91 - 05/91 -- Contract Consultant

X-Windows/Motif training, windowing system for inventory control on the PC; systems administration on Sun/HP/Harris secure networks, VTAM documentation verification for correctness.

TERRA-MAR, Mountain View, CA

04/90 - 01/91 -- Contract Consultant

Project managed and developed the porting of secure image processing systems in X-Windows in C and Fortran on Sun X11/R4 with Motif, and on PC environments. Created the Motif widgets for the user interface. The software processes satellite raster data to produce images on screen and on printers for use in oil and mineral exploration, defense, land management, water management, forestry, etc.

FRAME TECHNOLOGY, Milpitas, CA

01/90 - 03/90 -- Contract Consultant

Tested latest X-windows versions of the FrameMaker product on various platforms and X-terminals. Suggested user interface changes for usability and readability for various X-Windows environments (MWM, HPWM, TWM, UWM).

AMDAHL CORPORATION, Sunnyvale, CA

06/89 - 11/89 Diagnostics/Macrocode Test

Developed/modified/created Macrocode tools/tests for Amdahl mainframes. Validated test coverage through monitoring and mapping of execution. Scheduled/tracked all tests and diagnostics interfacing with the Macrocode.

02/87 - 06/89 Diagnostic Development
Responsible for development of over 40 tests, tools, and diagnostics under Amdahl UNIX (UTS) and other operating systems. These included emulators, system-to-system communication links, simulators, system-level diagnostics, etc.

HEWLETT-PACKARD, Cupertino, CA

07/86 - 02/87 -- Contract Consultant

Planned/implemented HP-1000 Operating System, RTE-A testing.

HARRISON and EAKIN, Inc., San Mateo, CA

07/86 - 09/86 -- Contract Consultant

Performed expert analysis for a legal firm of BIOSs of PC/286-type machines for Wyse and Businessland with respect to Phoenix' BIOS. Results confirmed original authorship of the BIOS work by the parties.

LOBOB LABORATORIES, San Jose, CA

05/85 - 09/85 -- Contract Consultant

Modified IBM's general Ledger/accounting software in BASIC on the System/23.

PLUS DEVELOPMENT CORPORATION, Milpitas, CA

08/84 - 07/86 -- Diagnostics, Software Development and Manufacturing Test

Produced the hard disk drive product -- HardCard. Established requirements; project-managed diagnostics, test equipment hardware and software development for use in-house and on the manufacturing line at Matsushita in Japan. This included software to interface to, and track, the manufacturing process. Responsible for compatibility testing company products on a wide variety of IBM-PCs and compatibles, including the HP Vectra. Worked with European distributors as Technical Representative for marketing and technical issues. Familiar with Japanese and several European languages and marketplaces.

DIALOGIC SYSTEMS CORPORATION, Sunnyvale, CA

12/83 - 07/84 -- Applications Development
Responsible for user-interface layer software development. Completed projects, including editors and interfaces to IBM host CPUs. Determined market requirements for product functional contents. Presented and demonstrated product to customers.

04/83 - 12/83 -- Product Assurance and Test
Developed and implemented all test strategies, methodologies, plans and procedures. Prepared/executed tests/scenarios for both hardware and software.

09/82 - 04/83 -- Diagnostics
Responsible for the development of on-line diagnostic systems for a 680X0-based multiprocessing computer system. Wrote tests in 680X0 and in C.

IBM CORPORATION, Palo Alto/San Jose, CA

09/74 - 09/82 -- Language Products

Managed development/test of state-of-the-art PL/I compilers; 5 major products; IBM representative at trade shows; customer user group conventions; managed outside vendor software development (Intermetrics); determined product requirements; approved world-wide forecasts for revenues/costs. Designed/developed a front end for the PL/I Checkout Compiler and major parts of the optimization phases of a new Optimizing compiler. DB2.

Managed IBM BASIC Compiler development. Managed vendor (Ryan-McFarland Corporation) development coordination. Tested/verified the product function.

Developed DOS COBOL Release 3 Compiler for IBM mainframes. IMS. Designed/developed parts of the OS/VS COBOL Release 2. Project managed tested the 8100 COBOL compiler.

UNIVERSITY APPLICATIONS PROCESSING CENTER, Brooklyn, NY

06/67 - 09/74 – Associate Director, Systems and Applications Programmer

Developed/maintained systems/programs, including real-time database inquiry applications with an Artificial Intelligence front-end. Modified JES2, MVS and TSO, and WYLBUR/MILTON for internal use. Wrote VM/CMS utility programs and a System/370 program debugger/simulator.