Comcast Cable Communications, LLC

Petitioner

v.

Promptu Systems Corporation

Patent Owner

IPR2018-00342, -00343 (Patent No. RE44,326)
IPR2018-00344, -00345 (Patent No. 7,047,196)

Oral Argument

January 28, 2019
Petitioner Comcast's Demonstratives

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

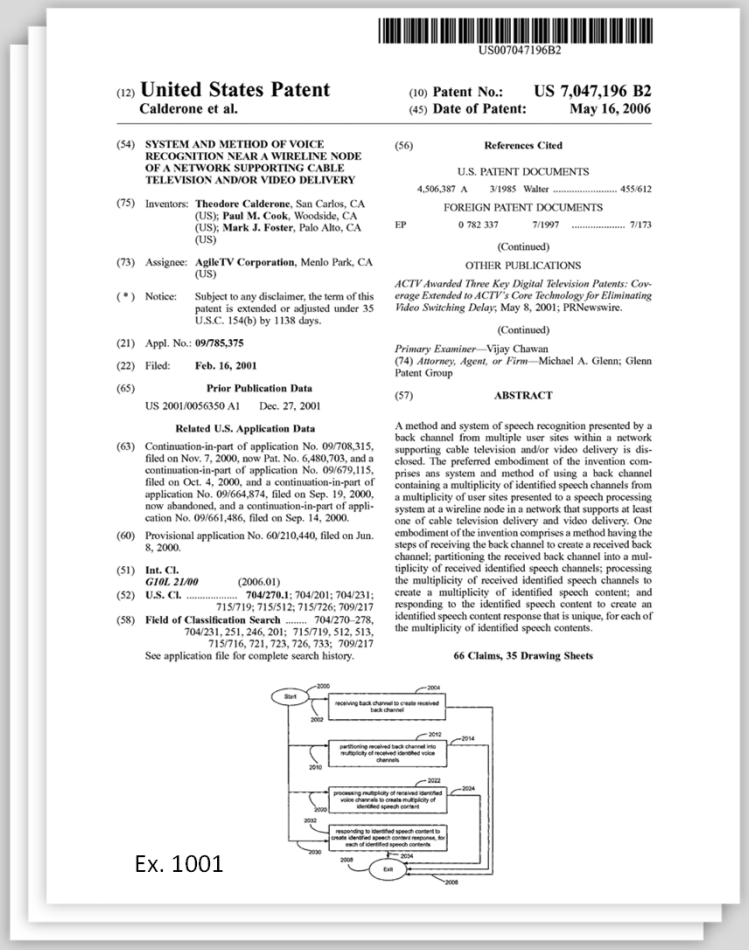
U.S. Patent No. 7,047,196

Case IPR2018-00344

Case IPR2018-00345

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

U.S. Patent No. 7,047,196



US007047196B2

(12) **United States Patent**
Calderone et al.

(10) **Patent No.: US 7,047,196 B2**
(45) **Date of Patent: May 16, 2006**

(54) **SYSTEM AND METHOD OF VOICE RECOGNITION NEAR A WIRELINE NODE OF A NETWORK SUPPORTING CABLE TELEVISION AND/OR VIDEO DELIVERY**

(75) Inventors: **Theodore Calderone**, San Carlos, CA (US); **Paul M. Cook**, Woodside, CA (US); **Mark J. Foster**, Palo Alto, CA (US)

(73) Assignee: **AgileTV Corporation**, Menlo Park, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1138 days.

(21) Appl. No.: **09/785,375**

(22) Filed: **Feb. 16, 2001**

(65) **Prior Publication Data**

US 2001/0056350 A1 Dec. 27, 2001

Related U.S. Application Data

(63) Continuation-in-part of application No. 09/708,315, filed on Nov. 7, 2000, now Pat. No. 6,480,703, and a continuation-in-part of application No. 09/679,115, filed on Oct. 4, 2000, and a continuation-in-part of application No. 09/664,874, filed on Sep. 19, 2000, now abandoned, and a continuation-in-part of application No. 09/661,486, filed on Sep. 14, 2000.

(60) Provisional application No. 60/210,440, filed on Jun. 8, 2000.

(51) **Int. Cl.**
G10L 21/00 (2006.01)

(52) **U.S. Cl.** **704/270.1**; 704/201; 704/231; 715/719; 715/512; 715/726; 709/217

(58) **Field of Classification Search** 704/270–278, 704/231, 251, 246, 201; 715/719, 512, 513, 715/716, 721, 723, 726, 733; 709/217
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,506,387 A 3/1985 Walter 455/612

FOREIGN PATENT DOCUMENTS

EP 0 782 337 7/1997 ..... 7/173

(Continued)

OTHER PUBLICATIONS

ACTV Awarded Three Key Digital Television Patents: Coverage Extended to ACTV's Core Technology for Eliminating Video Switching Delay; May 8, 2001; PRNewswire.

(Continued)

Primary Examiner—Vijay Chawan
(74) *Attorney, Agent, or Firm*—Michael A. Glenn; Glenn Patent Group

(57) **ABSTRACT**

A method and system of speech recognition presented by a back channel from multiple user sites within a network supporting cable television and/or video delivery is disclosed. The preferred embodiment of the invention comprises ans system and method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network that supports at least one of cable television delivery and video delivery. One embodiment of the invention comprises a method having the steps of receiving the back channel to create a received back channel; partitioning the received back channel into a multiplicity of received identified speech channels; processing the multiplicity of received identified speech channels to create a multiplicity of identified speech content; and responding to the identified speech content to create an identified speech content response that is unique, for each of the multiplicity of identified speech contents.

66 Claims, 35 Drawing Sheets

Ex. 1001

(57) **ABSTRACT**

A method and system of speech recognition presented by a back channel from multiple user sites within a network supporting cable television and/or video delivery is disclosed. The preferred embodiment of the invention comprises ans system and method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network that supports at least one of cable television delivery and video delivery. One embodiment of the invention comprises a method having the steps of receiving the back channel to create a received back channel; partitioning the received back channel into a multiplicity of received identified speech channels; processing the multiplicity of received identified speech channels to create a multiplicity of identified speech content; and responding to the identified speech content to create an identified speech content response that is unique, for each of the multiplicity of identified speech contents.

'196 Patent at Abstract (Ex. 1001)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

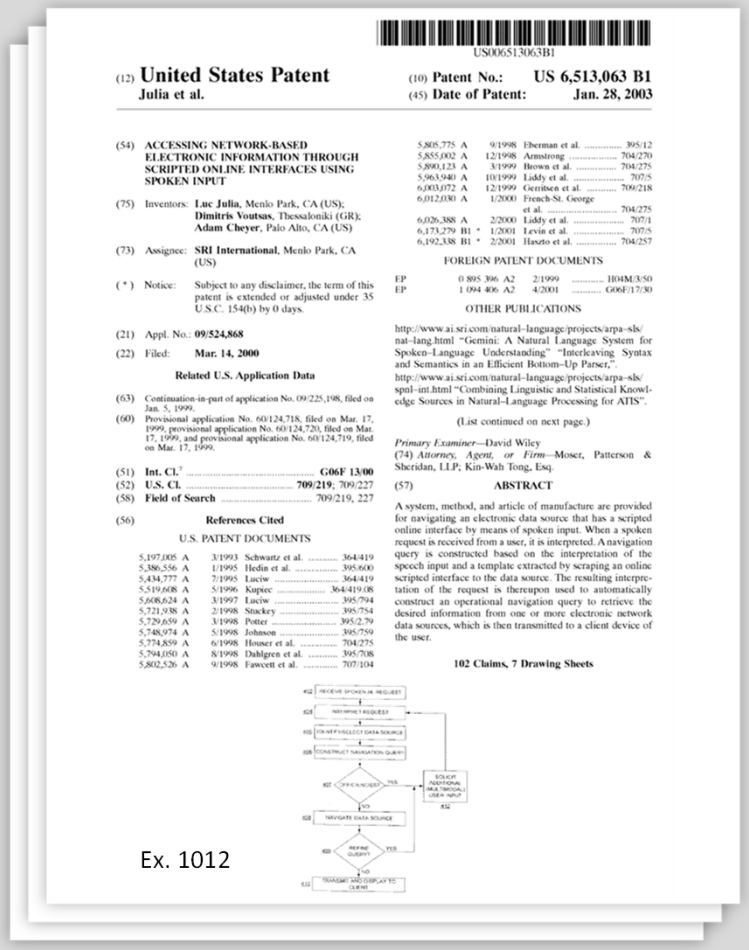
The Challenged Claims Are Obvious in Light of Julia

The Challenged Claims Are Obvious in Light of Murdock

Secondary Considerations Do Not Overcome Strong Evidence of Obviousness

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

U.S. Patent No. 6,513,063 ("Julia")



US006513063B1

(12) **United States Patent**
Julia et al.

(10) **Patent No.: US 6,513,063 B1**
(45) **Date of Patent: Jan. 28, 2003**

(54) **ACCESSING NETWORK-BASED ELECTRONIC INFORMATION THROUGH SCRIPTED ONLINE INTERFACES USING SPOKEN INPUT**

(75) Inventors: **Luc Julia**, Menlo Park, CA (US); **Dimitris Voutsas**, Thessaloniki (GR); **Adam Cheyer**, Palo Alto, CA (US)

(73) Assignee: **SRI International**, Menlo Park, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/524,868**

(22) Filed: **Mar. 14, 2000**

Related U.S. Application Data

(63) Continuation-in-part of application No. 09/225,198, filed on Jan. 5, 1999.
(60) Provisional application No. 60/124,718, filed on Mar. 17, 1999, provisional application No. 60/124,720, filed on Mar. 17, 1999, and provisional application No. 60/124,719, filed on Mar. 17, 1999.

(51) **Int. Cl.**[7] **G06F 13/00**
(52) **U.S. Cl.** **709/219**; 709/227
(58) **Field of Search** 709/219, 227

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,197,005	A	3/1993	Schwartz et al.	364/419
5,386,556	A	1/1995	Hedin et al.	395/600
5,434,777	A	7/1995	Luciw	364/419
5,519,608	A	5/1996	Kupiec	364/419.08
5,608,624	A	3/1997	Luciw	395/794
5,721,938	A	2/1998	Stuckey	395/754
5,729,659	A	3/1998	Potter	395/2.79
5,748,974	A	5/1998	Johnson	395/759
5,774,859	A	6/1998	Houser et al.	704/275
5,794,050	A	8/1998	Dahlgren et al.	395/708
5,802,526	A	9/1998	Fawcett et al.	707/104
5,805,775	A	9/1998	Eberman et al.	395/12
5,855,002	A	12/1998	Armstrong	704/270
5,890,123	A	3/1999	Brown et al.	704/275
5,963,940	A	10/1999	Liddy et al.	707/5
6,003,072	A	12/1999	Gerritsen et al.	709/218
6,012,030	A	1/2000	French-St. George et al.	704/275
6,026,388	A	2/2000	Liddy et al.	707/1
6,173,279	B1 *	1/2001	Levin et al.	707/5
6,192,338	B1 *	2/2001	Haszto et al.	704/257

FOREIGN PATENT DOCUMENTS

EP	0 895 396 A2	2/1999	H04M/3/50
EP	1 094 406 A2	4/2001	G06F/17/30

OTHER PUBLICATIONS

http://www.ai.sri.com/natural-language/projects/arpa-sls/nat-lang.html "Gemini: A Natural Language System for Spoken-Language Understanding" "Interleaving Syntax and Semantics in an Efficient Bottom-Up Parser,"
http://www.ai.sri.com/natural-language/projects/arpa-sls/spnl-int.html "Combining Linguistic and Statistical Knowledge Sources in Natural-Language Processing for ATIS".

(List continued on next page.)

Primary Examiner—David Wiley
(74) *Attorney, Agent, or Firm*—Moser, Patterson & Sheridan, LLP; Kin-Wah Tong, Esq.

(57) **ABSTRACT**

A system, method, and article of manufacture are provided for navigating an electronic data source that has a scripted online interface by means of spoken input. When a spoken request is received from a user, it is interpreted. A navigation query is constructed based on the interpretation of the speech input and a template extracted by scraping an online scripted interface to the data source. The resulting interpretation of the request is thereupon used to automatically construct an operational navigation query to retrieve the desired information from one or more electronic network data sources, which is then transmitted to a client device of the user.

102 Claims, 7 Drawing Sheets

Ex. 1012

(54) **ACCESSING NETWORK-BASED ELECTRONIC INFORMATION THROUGH SCRIPTED ONLINE INTERFACES USING SPOKEN INPUT**

(75) Inventors: **Luc Julia**, Menlo Park, CA (US); **Dimitris Voutsas**, Thessaloniki (GR); **Adam Cheyer**, Palo Alto, CA (US)

(73) Assignee: **SRI International**, Menlo Park, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/524,868**

(22) Filed: **Mar. 14, 2000**

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001

BACKGROUND OF THE INVENTION

The present invention relates generally to the navigation of electronic data by means of spoken natural language requests, and to feedback mechanisms and methods for resolving the errors and ambiguities that may be associated with such requests.

Julia at 1:15-20 (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001

In one preferred embodiment well-suited for the home entertainment setting, voice input device **102** is a portable remote control device with an integrated microphone, and the voice data is transmitted from device **102** preferably via infrared (or other wireless) link to communications box **104** (e.g., a set-top box or a similar communications device that is capable of retransmitting the raw voice data and/or processing the voice data) local to the user's environment and coupled to communications network **106**. The voice data is then transmitted across network **106** to a remote server or servers **108**. The voice data may

At remote server **108**, the voice data is processed by request processing logic **300** in order to understand the user's request and construct an appropriate query or request for navigation of remote data source **110**, ...

Julia at 3:45-55, 3:61-64 (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001

Once the desired information has been retrieved from data source **110**, it is electronically transmitted via network **106** to the user for viewing on client display device **112**. In a preferred embodiment well-suited for the home entertainment setting, display device **112** is a television monitor or similar audiovisual entertainment device, typically in stationary position for comfortable viewing by users.

Julia at 4:18-24 (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

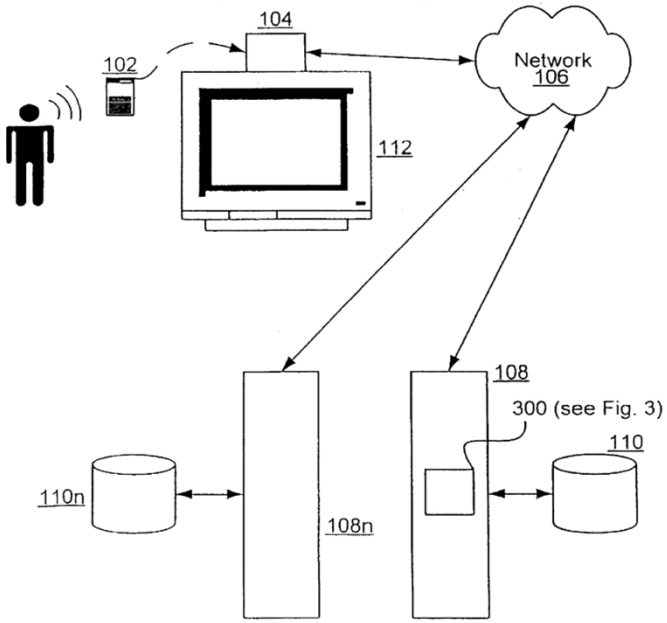
partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001

FIG. 1*a* illustrates a system providing a spoken natural language interface for network-based information navigation, in accordance with an embodiment of the present invention with server-side processing of requests;



Julia at 3:7-10 and Fig. 1a (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

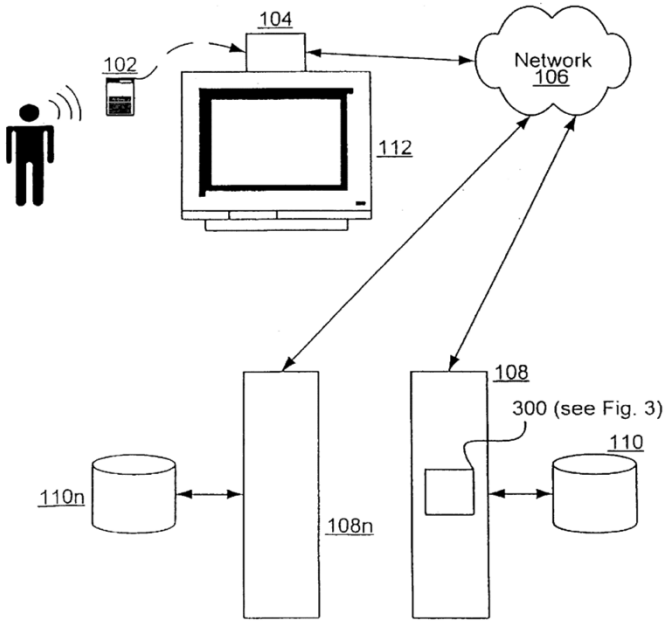
partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001

As illustrated in FIG. **2**, multiple users, each having their own client input device, may issue requests, simultaneously or otherwise, for navigation of data source **210**. This is equally true (though not explicitly drawn) for the embodiments depicted in FIGS. **1***a* and **1***b*.



Julia at 3:7-10 and Fig. 1a (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

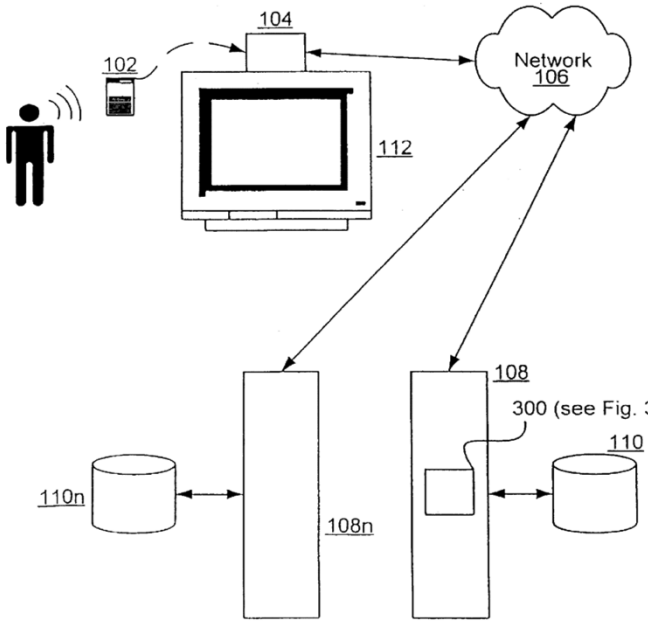
partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001

Network **106** is a two-way electronic communications network and may be embodied in electronic communication infrastructure including coaxial (cable television) lines, DSL, fiber-optic cable, traditional copper wire (twisted pair), or any other type of hardwired connection.



Julia at 4:31-35 and Fig. 1a (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

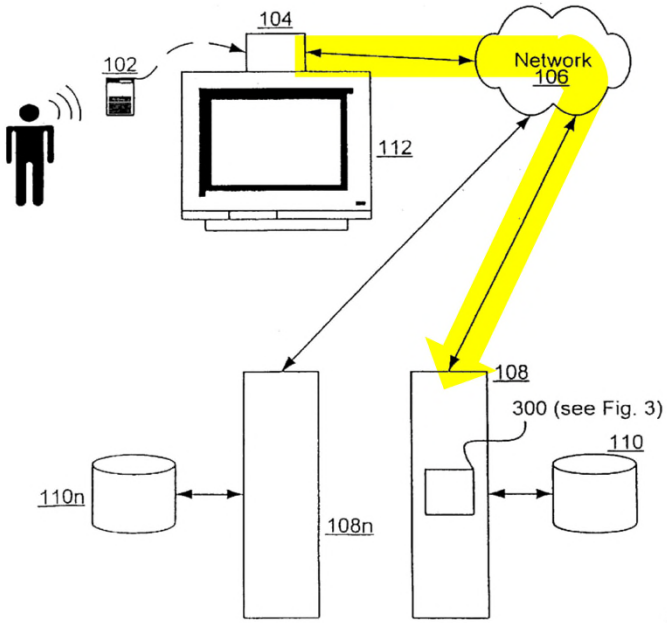
responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001

Petitioner's Expert

The upstream channel of network 106 is thus a "back channel" as that term is used in the '196 Patent, because it is an "upstream communication channel delivering signals from multiple user sites to a central wireline node."

Ex. 1019 ¶ 307 (see also ¶¶ 82-83)



Julia at Fig. 1a (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

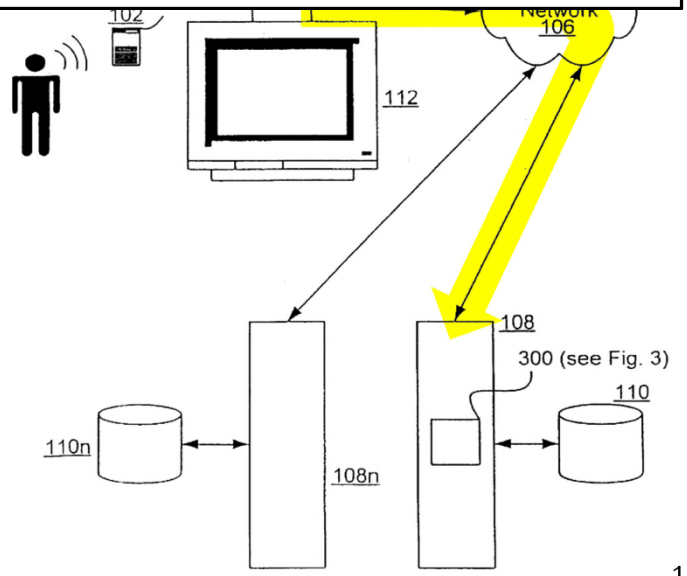
responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001

Petitioner's Expert

Julia discloses that a user's voice input data is transmitted from the user's "communication box 104 (e.g., a set-top box or a similar communications device that is capable of retransmitting the raw voice data and/or processing the voice data)" through network 106 to remote server 108, where the voice data is processed.

Ex. 1019 ¶ 311 (citing Julia 3:48-64, Fig. 1)



Julia at Fig. 1a (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

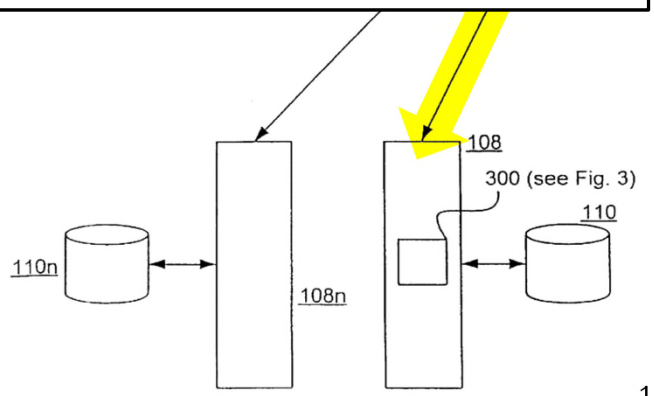
responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001

Petitioner's Expert

Julia also discloses that multiple network users may issue requests "simultaneously or otherwise," and that the data source 110 and processing logic are "preferably designed and implemented to support queuing and multi-tasking of requests from multiple simultaneous network users, as will be appreciated by those of skill in the art." Julia at 6:12-26. In other words, multiple users may send voice input data simultaneously through network 106 to remote server 108. The network server 108 therefore "receives" the back channel to "create a received back channel" (the data coming in from the multiple network users from via network 106).

Ex. 1019 ¶ 311



Julia at Fig. 1a (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001

Petitioner's Expert

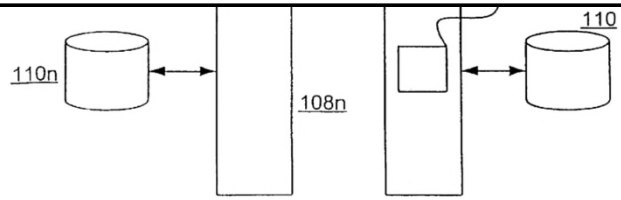
When the systems disclosed in the '196 Patent and in Julia are receiving voice data over that network back channel, they are "receiving said back channel to create a received back channel." The received back channel is "created" in the sense that it has been "received" by the speech processing system.

Ex. 1029 ¶ 8

Petitioner's Expert

The received back channel is not data; instead it is the upstream communications channel that carries the signals containing the data in the form of voice commands from multiple user sites once it has been received by the speech processing system.

Ex. 1029 ¶ 9



Julia at Fig. 1a (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001

Patent Owner's Expert

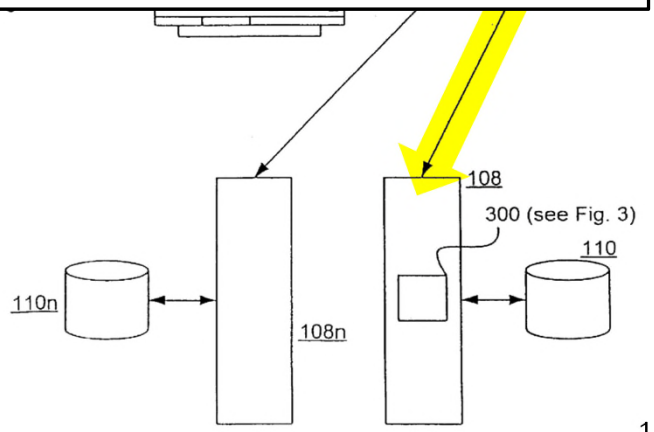
Q. And we'll talk a little bit more about the '196 patent. But in connection with your analysis of the '196 patent, did you try to construe any of the terms in that patent?

A. For the same reasons I just stated for the '538, my assignment was to look at the Comcast arguments.

Q. And so did you construe any terms in the '196 patent?

A. No.

Ex. 1026 at 32:19-33:3



Julia at Fig. 1a (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001

Patent Owner's Expert

Q. So am I right that you did not attempt to construe the term "received back channel" in the '196 patent claims?

A. I did not construe the term "received back channel" --

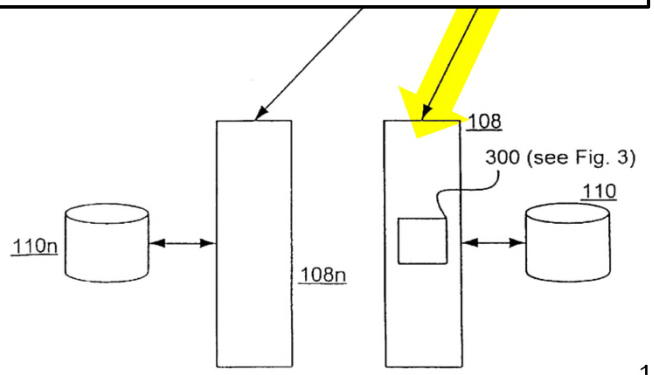
Q. Okay.

A. -- to make sure -- for the '196.

Q. Okay. And then similarly, you didn't attempt to construe the term "back channel" for the '196 patent. Right?

A. I did not attempt to construe the term "back channel" for the '196 patent.

Ex. 1026 at 100:11-22



Julia at Fig. 1a (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001

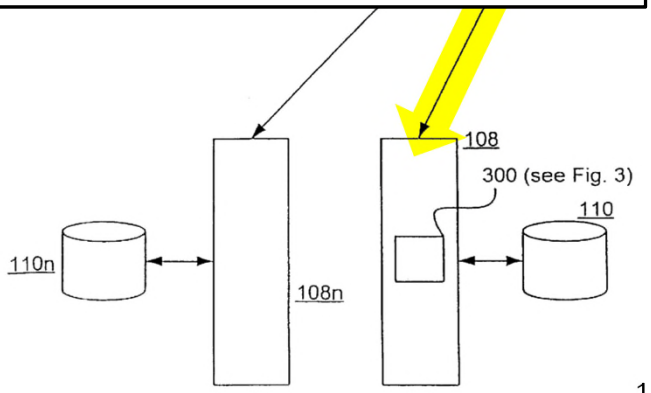
Patent Owner's Expert

Q. … [I]s it your opinion that the received back channel in the claims of the '196 patent does not refer to the underlying data coming in from the multiple network users.

* * *

THE WITNESS: I did not specifically construe the terms of the '196 claims. My task was to look at Comcast documents and argumentations, as I mentioned earlier, with the '538. So I was not asked to construe terms or decide what specifically they were or they weren't.

Ex. 1026 at 99:8-21



Julia at Fig. 1a (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

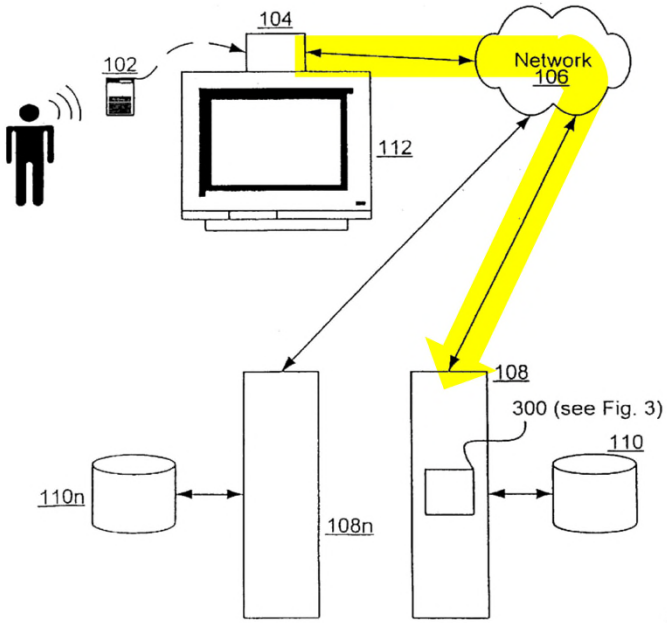
receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001



Julia at Fig. 1a (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001

As illustrated in FIG. **2**, multiple users, each having their own client input device, may issue requests, simultaneously or otherwise, for navigation of data source **210**. This is equally true (though not explicitly drawn) for the embodiments depicted in FIGS. **1***a* and **1***b*.

In the case of server-side speech processing, as exemplified in FIGS. **1***a* and **2**, the interpretation logic and error correction logic modules are also preferably designed and implemented to support queuing and multi-tasking of requests from multiple simultaneous network users, as will be appreciated by those of skill in the art.

Julia at 6:12-16, 20-26 (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001

Petitioner's Expert

As "known" and "appreciated by those of skill in the art" (Julia at 6:12-26, Ex. 1012) at the time of the '196 Patent, one way to support the simultaneous transmission and processing of voice requests from multiple network users is to multiplex the voice requests together for transmission over the back channel, and then demultiplex (partition) the voice requests at the remote server or headend.

Ex. 1019 ¶ 315

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001

Petitioner's Expert

The combination of Julia and Nazarathy discloses this partitioning of a received back channel as recited in claim 1 of the '196 Patent.

Ex. 1019 ¶ 316

In hybrid fiber coaxial cable networks such as used in cable television where two-way digital communications are desired, a distributed termination system is provided. In such a system the home terminals are digital terminals, such as digital set-top boxes or cable modems using bi-directional transmission standards.

The coaxial cable path is used for return (upstream) as well as for forward (downstream) transmission.

Each upstream channel frequency may be shared by many home terminals, by TDMA (Time-Division Multiple Access) as arbitrated by the ITS at the head-end.

Nazarathy at Abstract, 2:8-9, 2:32-35 (Ex. 1013)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001

Petitioner's Expert

The combination of Julia and Nazarathy discloses this partitioning of a received back channel as recited in claim 1 of the '196 Patent.

Ex. 1019 ¶ 316

The upstream optical digital return path signals (either baseband or passband ASK or another passband modulation format) then depart from the fiber nodes **194** in digital form on the upstream fibers, propagating all the way back to the head-end **202**, possibly via intermediate levels of WDM and/or TDM multiplexing.

Any operations of TDM and/or WDM multiplexing are undone at the HE by corresponding WDM and TDM demultiplexers.

Nazarathy at 14:28-33, 14:62-64 (Ex. 1013)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001

Petitioner's Expert

Further, Julia can also be combined with Quigley to disclose "partitioning" a received back channel as recited in claim 1 of the '196 Patent.

Ex. 1019 ¶ 319

A number of features for enhancing the performance of a cable transmission system in which data is transmitted between a cable modem termination system at a headend and a plurality of cable modems located different distances from the headend. The power transmission level, slot timing, and equalization of the cable modems are set by a ranging process. Data is transmitted by the modems in fragmented form. Various measures are taken to make transmission from the cable modems robust. The upstream data transmission is controlled to permit multiple access from the cable modems.

Quigley at Abstract (Ex. 1014)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001

Petitioner's Expert

Further, Julia can also be combined with Quigley to disclose "partitioning" a received back channel as recited in claim 1 of the '196 Patent.

Ex. 1019 ¶ 319

The upstream channel **491**, is divided into a plurality of time intervals **110**, each of which may optionally be further subdivided into a plurality of sub-intervals **489**. The upstream channel **491** is thus partitioned so as to facilitate the definition of time slots, such that each of a plurality of cable modems **12** may transmit data packets to the cable modem termination system **10** without interfering with one another, e.g., without having data collisions due to data packets being transmitted at the same time.

Quigley at 46:32-40 (Ex. 1014)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001

Petitioner's Expert

Thus, Nazarathy and Quigley disclose details for multiplexing / demultiplexing signals, which can be implemented in Julia to support receiving and processing simultaneous user requests. A person of ordinary skill in the art, looking for further details regarding how to implement Julia to support simultaneous requests, would thus naturally consider the teachings of Nazarathy and Quigley because they disclose methods for bi-directional communication that fit directly into the communication needs of Julia.

Ex. 1019 ¶ 443 (citing Julia at 6:12-26; Nazarathy at Abstract, 1:6-9, 13:64-14:46, 14:62-64; Quigley at 8:55-60, 9:56-10:3, 10:41-48, 46:32-40)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001

Petitioner's Expert

A person of ordinary skill in the art would have recognized the benefit of combining Julia with the teachings of Nazarathy and Quigley. Nazarathy is directed to providing more upstream bandwidth per user by multiplexing signals at intermediate network "hubs" in a hybrid fiber coaxial (HFC) network. ... Quigley is directed to avoiding any undesirable reductions in upstream data rates resulting from a plurality of subscribers competing for bandwidth over a common coaxial cable. … In a combined system, the upstream architectures for cable television systems disclosed in Nazarathy and Quigley would be combined with Julia's speech recognition system, providing more upstream bandwidth per user, allowing for higher fidelity audio commands and a better rate of recognition.

Ex. 1019 ¶ 444 (citing Nazarathy at 3:37-43 and Quigley at 1:46-58)

Petitioner's Expert

This would have been no more than combining prior art elements according to known methods to yield predictable results.

Ex. 1019 ¶ 445

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001

At remote server **108**, the voice data is processed by request processing logic **300** in order to understand the user's request and construct an appropriate query or request for navigation of remote data source **110**, in accordance with the interpretation process exemplified in FIG. **4** and FIG. **5** and discussed in greater detail below.

At step **402**, the user's spoken request for information is initially received in the form of raw (acoustic) voice data by a suitable input device, as previously discussed in connection with FIGS. **1—2**. At step **404** the voice data received from the user is interpreted in order to understand the user's request for information. Preferably this step includes performing speech recognition in order to extract words from the voice data, and further includes natural language parsing of those words in order to generate a structured linguistic representation of the user's request.

Julia at 3:61-65, 7:2-11 (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

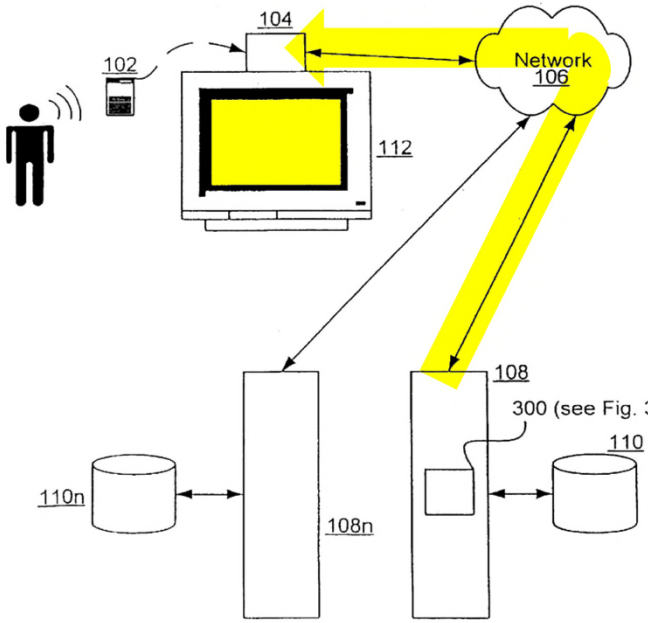
partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Ex. 1001

Once the desired information has been retrieved from data source **110**, it is electronically transmitted via network **106** to the user for viewing on client display device **112**. In a preferred embodiment well-suited for the home entertainment setting, display device **112** is a television monitor or similar audiovisual entertainment device, typically in stationary position for comfortable viewing by users.



Julia at 4:18-24 and Fig. 1a (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

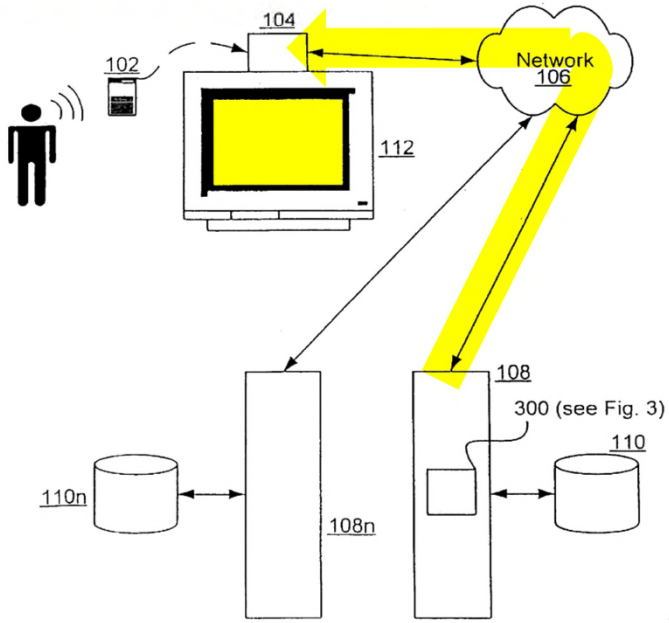
receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

Utilizing the user's supplemental input, request processing logic **300** iterates again through steps **404** and **406**, this time constructing a fully-specified query that specifically requests the Eastwood film "Unforgiven." Step **408** navigates the data source using that query and retrieves the desired film, which is then electronically transmitted in step **410** from network server **108** to client display device **112** via communications network **106**.



Julia at 11:60-67 and Fig. 1a (Ex. 1012)

Ex. 1001

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia & Nazarathy or Quigley

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

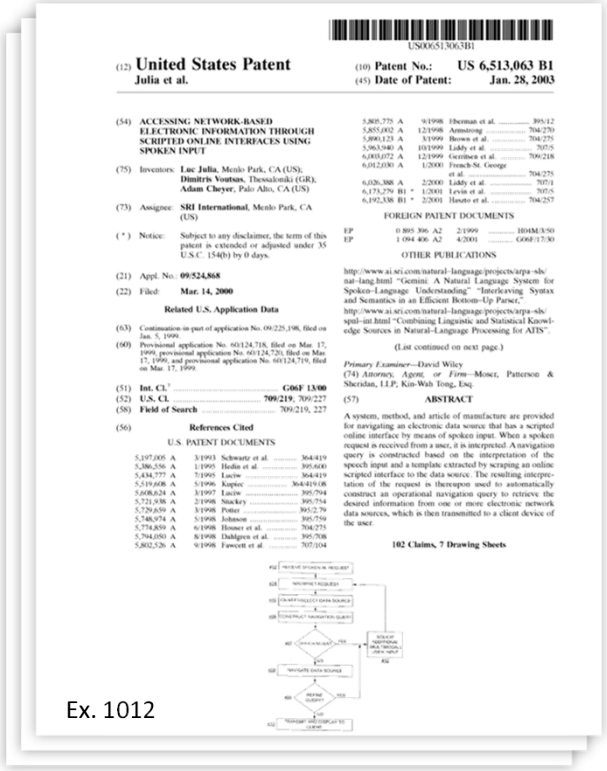
receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

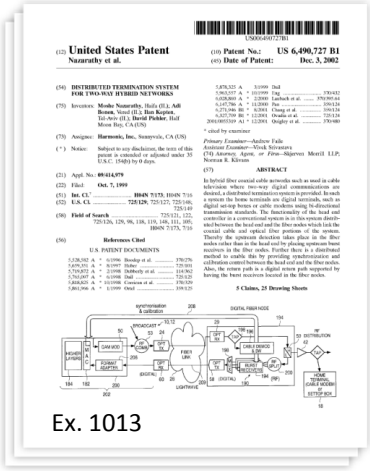
processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

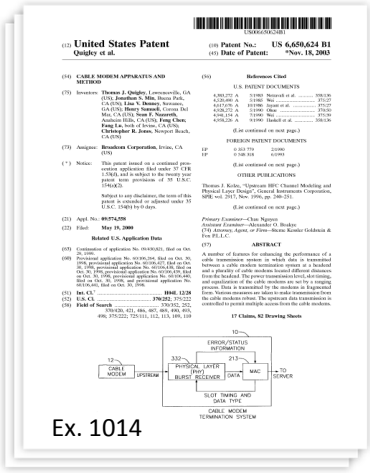
Ex. 1001



Ex. 1012



Ex. 1013



Ex. 1014

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 5 Is Obvious in Light of Julia Alone or With Gordon or Banker

5. The method of claim 2,

wherein the step responding to said identified speech contents from said associated user site is comprised of the steps of:

assessing said speech content response identified as to said user site to create a financial consequence identified as to said user site; and

billing said user site based upon said financial consequence.

Ex. 1001

Petition

Julia alone therefore renders claim 5 obvious. In addition, Julia can be combined with either Banker or Gordon to disclose the "assessing" and "billing" steps, as discussed above in connection with Murdock. *See* Section VII.B.1, above; Schmandt Decl. ¶¶ 348-349.

Paper 1 at 63

Petition

Thus, Gordon discloses the "assessing" and "billing" steps as well. Schmandt Decl. ¶ 185.

Paper 1 at 37-38 (citing Gordon at 2:60-63, 9:64-10:9, 10:16-27, 10:43-46, Fig. 3B, Fig. 8)

Petition

Thus, Banker discloses the "assessing" and "billing" steps. Schmandt Decl. ¶ 184.

Paper 1 at 37 (citing Banker at 16:43-50, 16:62-7:1, 7:60-63, 16:51-55, 16:67-17:3, Fig. 6F)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 5 Is Obvious in Light of Julia With Gordon or Banker

5. The method of claim 2,

wherein the step responding to said identified speech contents from said associated user site is comprised of the steps of:

assessing said speech content response identified as to said user site to create a financial consequence identified as to said user site; and

billing said user site based upon said financial consequence.

Further, practitioners may choose to implement the each of the various embodiments described above on any number of different hardware and software computing platforms and environments and various combinations thereof, including, by way of just a few examples: a general-purpose hardware microprocessor such as the Intel Pentium series; operating system software such as Microsoft Windows/CE, Palm OS, or Apple Mac OS (particularly for client devices and client-side processing), or Unix, Linux, or Windows/NT (the latter three particularly for network data servers and server-side processing), and/or proprietary information access platforms such as Microsoft's WebTV or the Diva Systems video-on-demand system.

Ex. 1001

Julia at 6:47-60 (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 5 Is Obvious in Light of Julia With Gordon or Banker

5. The method of claim 2,

wherein the step responding to said identified speech contents from said associated user site is comprised of the steps of:

assessing said speech content response identified as to said user site to create a financial consequence identified as to said user site; and

billing said user site based upon said financial consequence.

Ex. 1001

Petitioner's Expert

A person of ordinary skill in the art would recognize from this disclosure that the Julia system can be used to "create a financial consequence" by implementing the Julia voice-control system on a Diva Systems video-on-demand system.

Ex. 1029 ¶ 21

system software such as Microsoft Windows/CE, Palm OS, or Apple Mac OS (particularly for client devices and client-side processing), or Unix, Linux, or Windows/NT (the latter three particularly for network data servers and server-side processing), and/or proprietary information access platforms such as Microsoft's WebTV or the Diva Systems video-on-demand system.

Julia at 6:47-60 (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

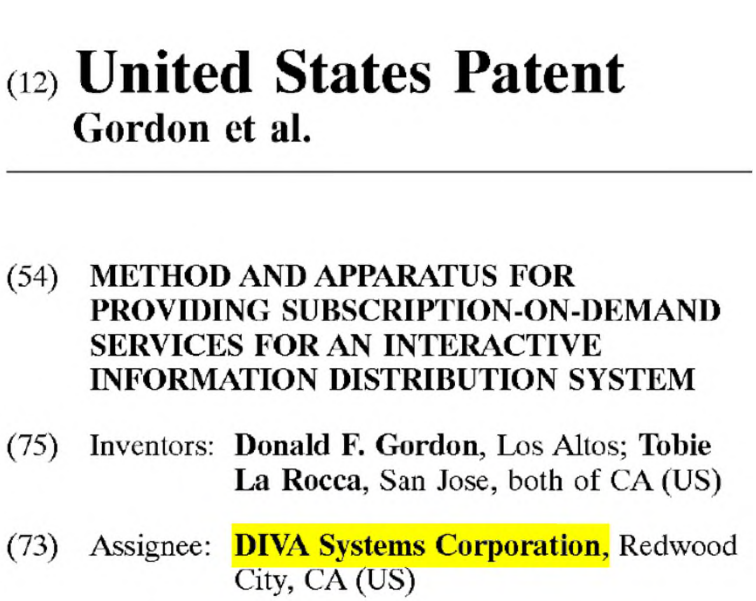
Claim 5 Is Obvious in Light of Julia With Gordon or Banker

5. The method of claim 2,

wherein the step responding to said identified speech contents from said associated user site is comprised of the steps of:

assessing said speech content response identified as to said user site to create a financial consequence identified as to said user site; and

billing said user site based upon said financial consequence.



(12) **United States Patent**
Gordon et al.

(54) **METHOD AND APPARATUS FOR PROVIDING SUBSCRIPTION-ON-DEMAND SERVICES FOR AN INTERACTIVE INFORMATION DISTRIBUTION SYSTEM**

(75) Inventors: **Donald F. Gordon**, Los Altos; **Tobie La Rocca**, San Jose, both of CA (US)

(73) Assignee: **DIVA Systems Corporation**, Redwood City, CA (US)

Ex. 1001

Gordon (Ex. 1016)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 5 Is Obvious in Light of Julia With Gordon or Banker

5. The method of claim 2,

wherein the step responding to said identified speech contents from said associated user site is comprised of the steps of:

assessing said speech content response identified as to said user site to create a financial consequence identified as to said user site; and

billing said user site based upon said financial consequence.

Ex. 1001

A method and apparatus for providing subscription-on-demand (SOD) services for a interactive information distribution system, where a consumer may subscribe to packages of on-demand programs for a single price and view the programs in the subscribed package at any time for no additional cost.

* * * * *

In addition, a non-subscriber of a particular service is quickly identified and provided the opportunity to, through the use of a graphical user interface, subscribe to the programming provided by the system.

Gordon at Abstract (Ex. 1016)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 5 Is Obvious in Light of Julia With Gordon or Banker

5. The method of claim 2,

wherein the step responding to said identified speech contents from said associated user site is comprised of the steps of:

assessing said speech content response identified as to said user site to create a financial consequence identified as to said user site; and

billing said user site based upon said financial consequence.

When the subscriber selects a title in step **340**, the title selection, e.g., a program identification (PID), is sent to the video session manager. After receiving a title selection, the video session manager determines, at step **344**, the title price. The price of the programming selected from the title menu is determined by the video session manager sending a price request to the network manager. The network manager performs a search of its pricing database and returns a price of either zero or non-zero.

Ex. 1001

Gordon at 9:26-35 (Ex. 1016)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 5 Is Obvious in Light of Julia With Gordon or Banker

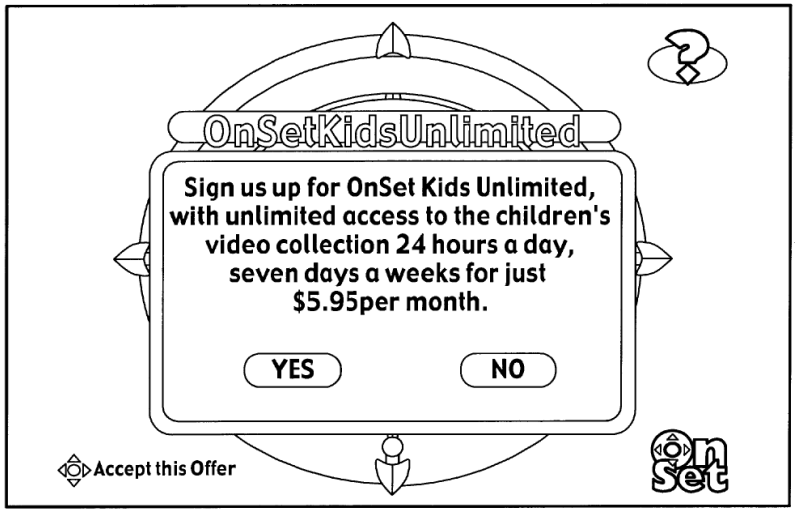
5. The method of claim 2,

wherein the step responding to said identified speech contents from said associated user site is comprised of the steps of:

assessing said speech content response identified as to said user site to create a financial consequence identified as to said user site; and

billing said user site based upon said financial consequence.

FIG. **8** depicts an exemplary screen **800** for interactively requesting a subscription-on-demand service, i.e., offers the subscriber an option to purchase a subscription.



Ex. 1001

Gordon at 10:10-12 and Fig. 8 (Ex. 1016)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 5 Is Obvious in Light of Julia With Gordon or Banker

5. The method of claim 2,

wherein the step responding to said identified speech contents from said associated user site is comprised of the steps of:

assessing said speech content response identified as to said user site to create a financial consequence identified as to said user site; and

billing said user site based upon said financial consequence.

The system provides certain packages of on-demand programming, i.e., childrens programming, that a consumer may elect to subscribe to for a single price. As such, through manipulation of the menus, the consumer selects a programming package, becomes a subscriber to that package and is billed accordingly.

After updating the subscription data base, the routine updates, at step **382**, the administrative system such that the interactive information distribution system's billing system is updated with the new subscriber's account number.

Ex. 1001

Gordon at 2:58-63, 10:43-47 (Ex. 1016)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 5 Is Obvious in Light of Julia With Gordon or Banker

5. The method of claim 2,

wherein the step responding to said identified speech contents from said associated user site is comprised of the steps of:

assessing said speech content response identified as to said user site to create a financial consequence identified as to said user site; and

billing said user site based upon said financial consequence.

Apparatus for providing a user friendly interface to a subscription television terminal comprises a key pad arranged into a plurality of key groupings and an on-screen display controller for generating a plurality of screens for display on an associated television receiver.

* * * * *

Other features of a terminal in accorance with the invention include messaging, establishing a favorite channel list, pay-per-view, program timing, and terminal control.

Ex. 1001

Banker at Abstract (Ex. 1015)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 5 Is Obvious in Light of Julia With Gordon or Banker

5. The method of claim 2,

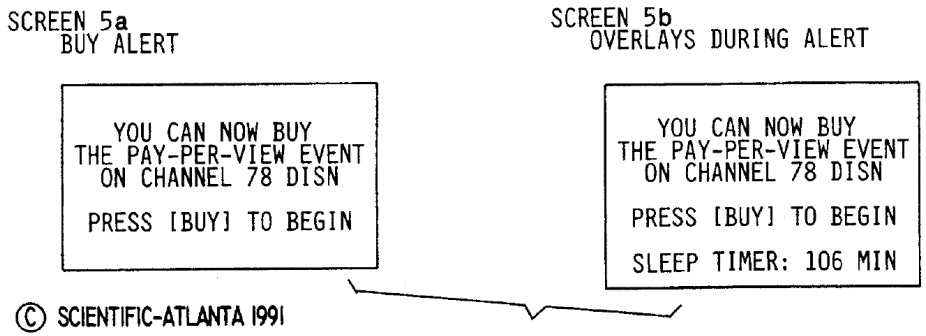
wherein the step responding to said identified speech contents from said associated user site is comprised of the steps of:

assessing said speech content response identified as to said user site to create a financial consequence identified as to said user site; and

billing said user site based upon said financial consequence.

When the terminal of FIG. **3** is in the On mode and tuned to a pay-per-view channel showing an event with its purchase time window open, the user by actuating the BUY key initiates a buy sequence. Consequently, this key is used to purchase an event.

Actuating the BUY key begins a purchase sequence.



Ex. 1001

Banker at 16:51-55, 16:62, Fig. 6E (Ex. 1015)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 5 Is Obvious in Light of Julia With Gordon or Banker

5. The method of claim 2,

wherein the step responding to said identified speech contents from said associated user site is comprised of the steps of:

assessing said speech content response identified as to said user site to create a financial consequence identified as to said user site; and

billing said user site based upon said financial consequence.

FIG. **1** is a block diagram of a headend for a subscription television system in accordance with the present invention. Billing computer **101** includes a subscriber database and generates a monthly bill for the subscribers in the system based on level of service and any pay-per-view and impulse pay-per-view purchases.

Ex. 1001

Banker at 7:58-63 (Ex. 1015)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 5 Is Obvious in Light of Julia With Gordon or Banker

5. The method of claim 2,

wherein the step responding to said identified speech contents from said associated user site is comprised of the steps of:

assessing said speech content response identified as to said user site to create a financial consequence identified as to said user site; and

billing said user site based upon said financial consequence.

Ex. 1001

Petitioner's Expert

A person of ordinary skill in the art in 2000 would have understood that both video-on-demand subscription services (like Netflix, although it did not exist in 2000) and pay-per-view services create a financial consequence for the user.

Ex. 1029 ¶ 24

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 13 Is Obvious in Light of Julia

13. The method of claim 2,

wherein the step processing said multiplicity of said received speech channels is further comprised for at least one of said user sites is further comprised of the step of:

processing said received speech channels from said user site based upon natural language for said user site to create said speech content identified as to said user site.

For users to take full advantage of this content stream ultimately requires interactive navigation of content databases in a manner that is too complex for user-friendly selection by means of a traditional remote-control clicker. Allowing spoken natural language requests as the input modality for rapidly searching and accessing desired content is an important objective for a successful consumer entertainment product in a context offering a dizzying range of database content choices.

More fundamentally, the front-end must allow users to speak directly in terms of what the user ultimately wants—e.g., "I'd like to see a Western film directed by Clint Eastwood"—as opposed to speaking in terms of arbitrary navigation structures (e.g., hierarchical layers of menus, commands, etc.) that are essentially artifacts reflecting constraints of the pre-existing text/click navigation system.

Ex. 1001

Julia at 1:35-42, 1:65-2:5 (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 13 Is Obvious in Light of Julia

13. The method of claim 2,

wherein the step processing said multiplicity of said received speech channels is further comprised for at least one of said user sites is further comprised of the step of:

processing said received speech channels from said user site based upon natural language for said user site to create said speech content identified as to said user site.

For example, users of an appropriate embodiment of the present invention for a video-on-demand application can directly speak the natural request: "Show me the movie "Unforgiven" - ....

Alternatively, the user can preferably say, "Let's see Unforgiven," having now been reminded of the title by the menu display.

Utilizing the user's supplemental input, request processing logic **300** iterates again through steps **404** and **406**, this time constructing a fully-specified query that specifically requests the Eastwood film "Unforgiven." Step **408** navigates the data source using that query and retrieves the desired film, which is then electronically transmitted in step **410** from network server **108** to client display device **112** via communications network **106**.

Ex. 1001

Julia at 10:9-13, 11:57-67

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 14 Is Obvious in Light of Julia

14. A program system controlling at least part of a speech recognition system coupled to a wireline node in a network, said program system comprising the program steps of:

processing a multiplicity of received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique to each of said multiplicity of identified speech contents:

wherein said speech recognition system is provided said multiplicity of received identified speech channels based upon a received back channel at said wireline node from a multiplicity of user sites coupled to said network;

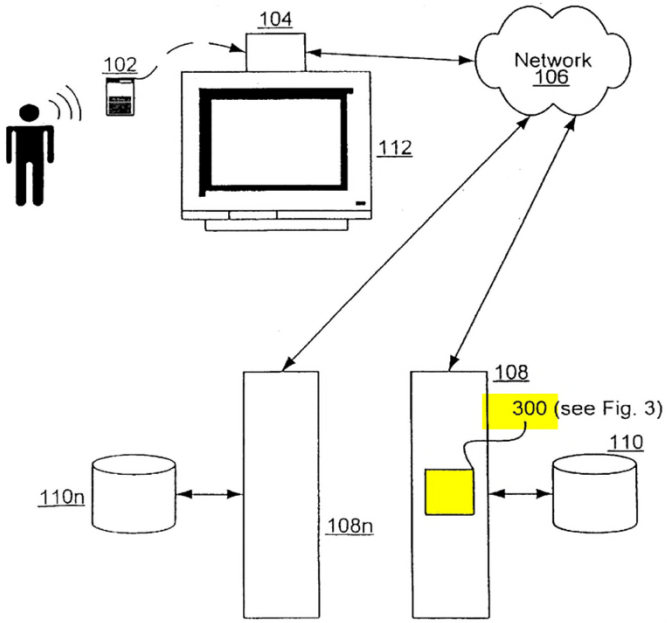
wherein each of said program steps reside in memory accessibly coupled to at least one computer included in said speech recognition system;

wherein said at least one computer communicatively couples through said wireline node to said multiplicity of user sites; and

wherein said network supports at least one of the collection comprising: cable television delivery to said multiplicity of user sites; and video delivery to said multiplicity of user sites.

Ex. 1001

At remote server **108**, the voice data is processed by request processing logic **300** in order to understand the user's request and construct an appropriate query or request for navigation of remote data source **110**, in accordance with the interpretation process exemplified in FIG. **4** and FIG. **5** and discussed in greater detail below.



Julia at 3:61-65 and Fig. 1a (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 14 Is Obvious in Light of Julia

14. A program system controlling at least part of a speech recognition system coupled to a wireline node in a network, said program system comprising the program steps of:

processing a multiplicity of received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique to each of said multiplicity of identified speech contents:

wherein said speech recognition system is provided said multiplicity of received identified speech channels based upon a received back channel at said wireline node from a multiplicity of user sites coupled to said network;

wherein each of said program steps reside in memory accessibly coupled to at least one computer included in said speech recognition system;

wherein said at least one computer communicatively couples through said wireline node to said multiplicity of user sites; and

wherein said network supports at least one of the collection comprising: cable television delivery to said multiplicity of user sites; and video delivery to said multiplicity of user sites.

Ex. 1001

Computer **1150** is coupled **1132** to remote interface **1130** and also coupled **1142** to set-top box interface **1140**. Computer **1150** executes a program system including program steps residing in accessibly coupled **1162** memory **1160**.

'196 Patent at 26:48-51 (Ex. 1001)

At least one computer contained in speech processor computer network **1640** and/or **1650** performs at least some of the operations of FIG. **10** and may be directed by program system **2000** containing program steps residing in memory accessibly coupled to that computer.

'196 Patent at 40:42-46 (Ex. 1001)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 14 Is Obvious in Light of Julia

14. A program system controlling at least part of a speech recognition system coupled to a wireline node in a network, said program system comprising the program steps of:

processing a multiplicity of received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique to each of said multiplicity of identified speech contents:

wherein said speech recognition system is provided said multiplicity of received identified speech channels based upon a received back channel at said wireline node from a multiplicity of user sites coupled to said network;

wherein each of said program steps reside in memory accessibly coupled to at least one computer included in said speech recognition system;

wherein said at least one computer communicatively couples through said wireline node to said multiplicity of user sites; and

wherein said network supports at least one of the collection comprising: cable television delivery to said multiplicity of user sites; and video delivery to said multiplicity of user sites.

Ex. 1001

Speech engine **1430** may be controlled by a program system implementing FIG. **10**, distributed as program steps residing in memories accessibly coupled to at least one computer in one or more of the following: speech content gateway **3100**, speech processor computer network **1640** and/or speech processor computer network **1650**. Each of

'196 Patent at 40:55-60 (Ex. 1001)

By way of example, one or more computers in the speech content gateway **3100** receive the back channel **2004** and partition the back channel into the multiple received identified speech channels **2012**. Computers in speech processor

'196 Patent at 40:64-67 (Ex. 1001)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 14 Is Obvious in Light of Julia Alone or in Combination

14. A program system controlling at least part of a speech recognition system coupled to a wireline node in a network, said program system comprising the program steps of:

processing a multiplicity of received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique to each of said multiplicity of identified speech contents:

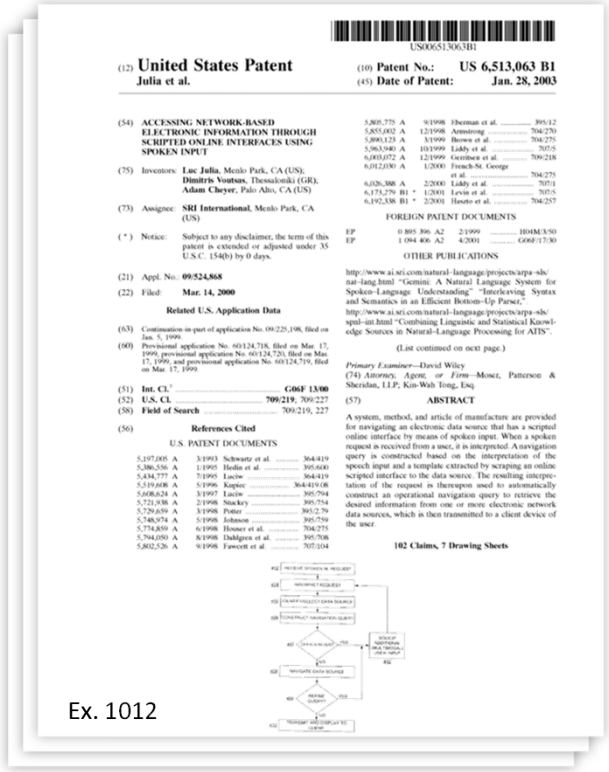
wherein said speech recognition system is provided said multiplicity of received identified speech channels based upon a received back channel at said wireline node from a multiplicity of user sites coupled to said network;

wherein each of said program steps reside in memory accessibly coupled to at least one computer included in said speech recognition system;

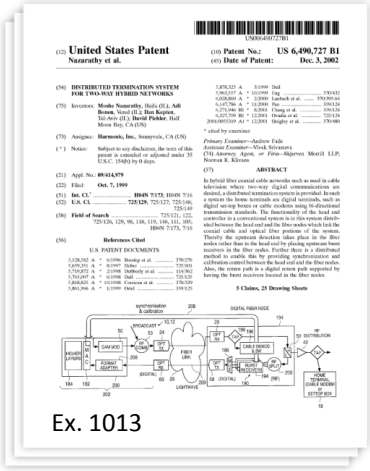
wherein said at least one computer communicatively couples through said wireline node to said multiplicity of user sites; and

wherein said network supports at least one of the collection comprising: cable television delivery to said multiplicity of user sites; and video delivery to said multiplicity of user sites.

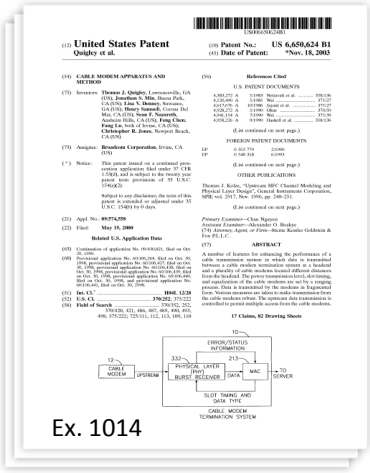
Ex. 1001



Ex. 1012



Ex. 1013



Ex. 1014

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 27 Is Obvious in Light of Julia & Nazarathy or Quigley

27. A system supporting speech recognition in a network, said system comprising:

a speech recognition system coupled to a wireline node in said network for receiving a back channel from a multiplicity of user sites coupled to said network, further comprising

a back channel receiver, for receiving said back channel to create a received back channel;

a speech channel partitioner, for partitioning said received back channel into a multiplicity of received identified speech channels; and

a processor network executing a program system comprised of program steps residing in memory accessibly coupled to at least one computer in said processor network;

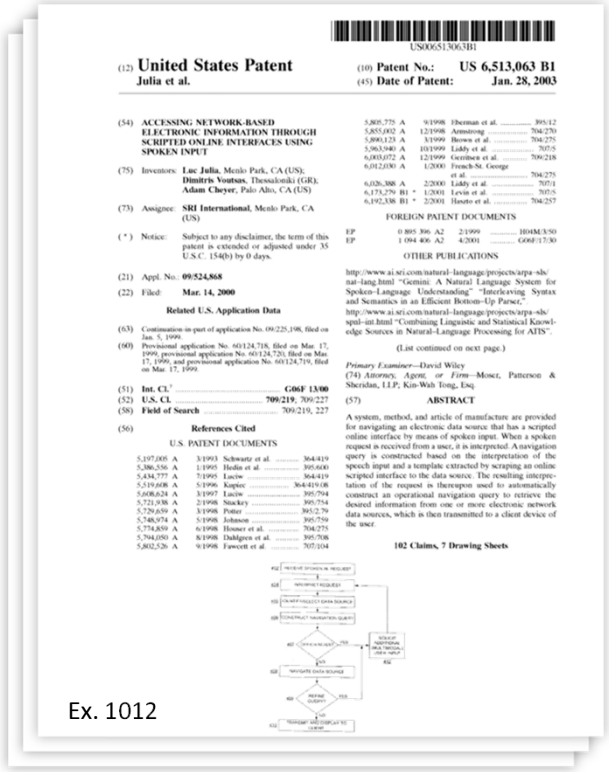
wherein said program system is comprised of the program steps of:

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content;

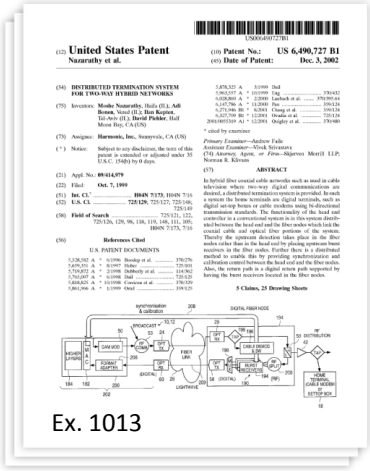
responding to said identified speech content to create an identified speech content response, for each of said multiplicity of said identified speech contents; and

wherein said network supports at least one of the collection comprising: cable television delivery to said multiplicity of user sites; and video delivery to said multiplicity of user sites.

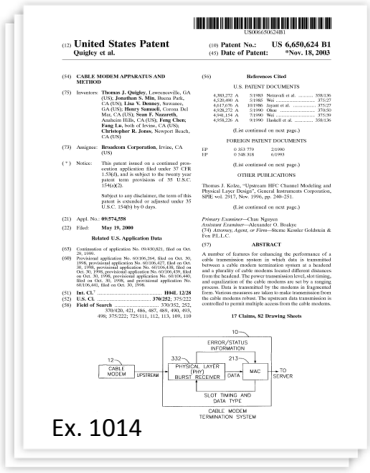
Ex. 1001



Ex. 1012



Ex. 1013



Ex. 1014

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 53 Is Obvious in Light of Julia Alone or in Combination

53. A method of operating at least part of a speech recognition system coupled to a wireline node in a network, comprising the steps of: ✓

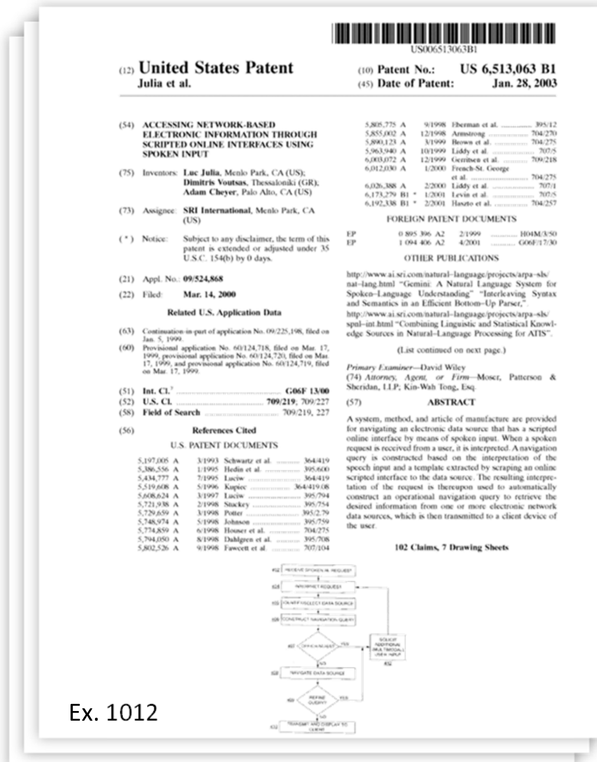
processing a multiplicity of received identified speech channels to create a multiplicity of identified speech content; and ✓

responding to said identified speech content to create an identified speech content response that is unique to each of said multiplicity of identified speech contents; ✓

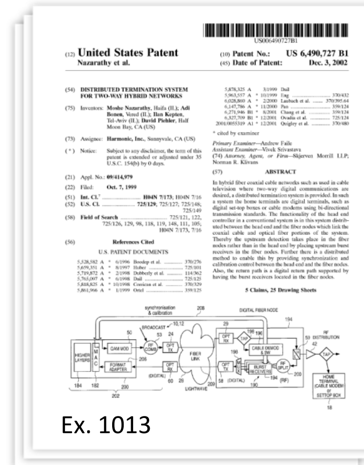
wherein said speech recognition system is provided said multiplicity of received identified speech channels based upon a received back channel at said wireline node from a multiplicity of user sites coupled to said network; ✓

wherein said network supports at least one of the collection comprising: cable television delivery to said multiplicity of user sites; and video delivery to said multiplicity of user sites. ✓

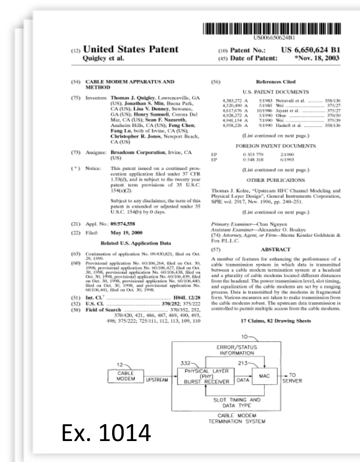
Ex. 1001



Ex. 1012



Ex. 1013



Ex. 1014

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

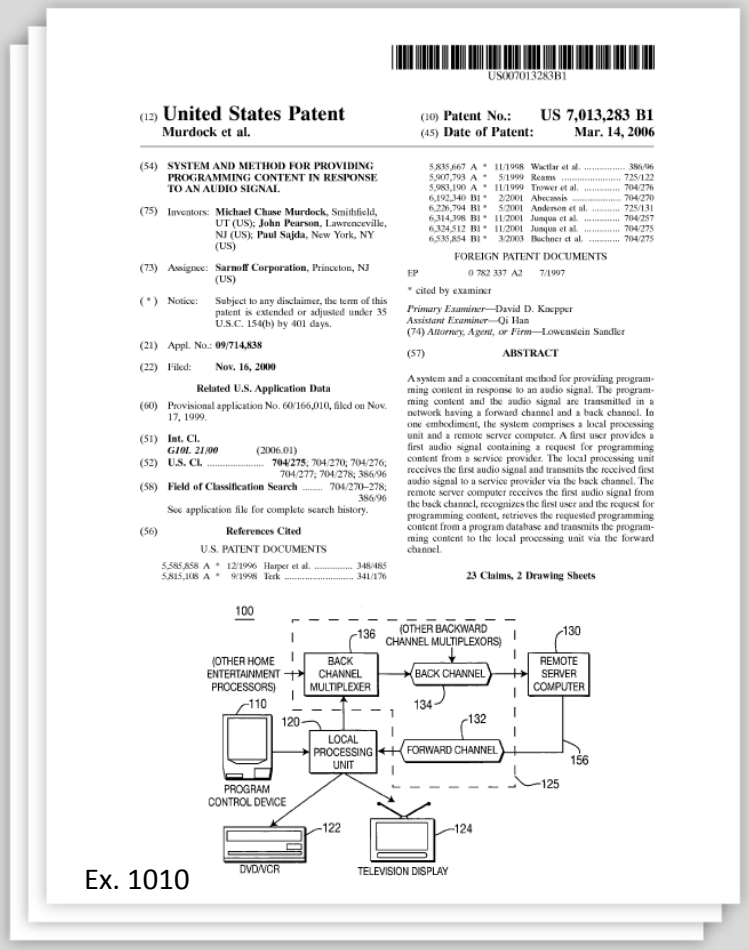
The Challenged Claims
Are Obvious in Light of Julia

The Challenged Claims
Are Obvious in Light of Murdock

Secondary Considerations Do Not
Overcome Strong Evidence of Obviousness

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

U.S. Patent No. 7,013,283 ("Murdock")



US007013283B1

(12) **United States Patent**
Murdock et al.

(10) **Patent No.: US 7,013,283 B1**
(45) **Date of Patent: Mar. 14, 2006**

(54) **SYSTEM AND METHOD FOR PROVIDING PROGRAMMING CONTENT IN RESPONSE TO AN AUDIO SIGNAL**

(75) Inventors: **Michael Chase Murdock**, Smithfield, UT (US); **John Pearson**, Lawrenceville, NJ (US); **Paul Sajda**, New York, NY (US)

(73) Assignee: **Sarnoff Corporation**, Princeton, NJ (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 401 days.

(21) Appl. No.: **09/714,838**

(22) Filed: **Nov. 16, 2000**

Related U.S. Application Data

(60) Provisional application No. 60/166,010, filed on Nov. 17, 1999.

(51) **Int. Cl.**
G10L 21/00 (2006.01)

(52) **U.S. Cl.** **704/275**; 704/270; 704/276; 704/277; 704/278; 386/96

(58) **Field of Classification Search** 704/270–278; 386/96
See application file for complete search history.

(56) **References Cited**
U.S. PATENT DOCUMENTS

5,585,858 A * 12/1996 Harper et al. 348/485
5,815,108 A * 9/1998 Terk 341/176
5,835,667 A * 11/1998 Wactlar et al. 386/96
5,907,793 A * 5/1999 Reams 725/122
5,983,190 A * 11/1999 Trower et al. 704/276
6,192,340 B1 * 2/2001 Abecassis 704/270
6,226,794 B1 * 5/2001 Anderson et al. 725/131
6,314,398 B1 * 11/2001 Junqua et al. 704/257
6,324,512 B1 * 11/2001 Junqua et al. 704/275
6,535,854 B1 * 3/2003 Buchner et al. 704/275

FOREIGN PATENT DOCUMENTS

EP 0 782 337 A2 7/1997

* cited by examiner

Primary Examiner—David D. Knepper
Assistant Examiner—Qi Han
(74) *Attorney, Agent, or Firm*—Lowenstein Sandler

(57) **ABSTRACT**

A system and a concomitant method for providing programming content in response to an audio signal. The programming content and the audio signal are transmitted in a network having a forward channel and a back channel. In one embodiment, the system comprises a local processing unit and a remote server computer. A first user provides a first audio signal containing a request for programming content from a service provider. The local processing unit receives the first audio signal and transmits the received first audio signal to a service provider via the back channel. The remote server computer receives the first audio signal from the back channel, recognizes the first user and the request for programming content, retrieves the requested programming content from a program database and transmits the programming content to the local processing unit via the forward channel.

23 Claims, 2 Drawing Sheets

Ex. 1010

(54) **SYSTEM AND METHOD FOR PROVIDING PROGRAMMING CONTENT IN RESPONSE TO AN AUDIO SIGNAL**

(75) Inventors: **Michael Chase Murdock**, Smithfield, UT (US); **John Pearson**, Lawrenceville, NJ (US); **Paul Sajda**, New York, NY (US)

(73) Assignee: **Sarnoff Corporation**, Princeton, NJ (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 401 days.

(21) Appl. No.: **09/714,838**

(22) Filed: **Nov. 16, 2000**

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Murdock Alone or in Combination

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

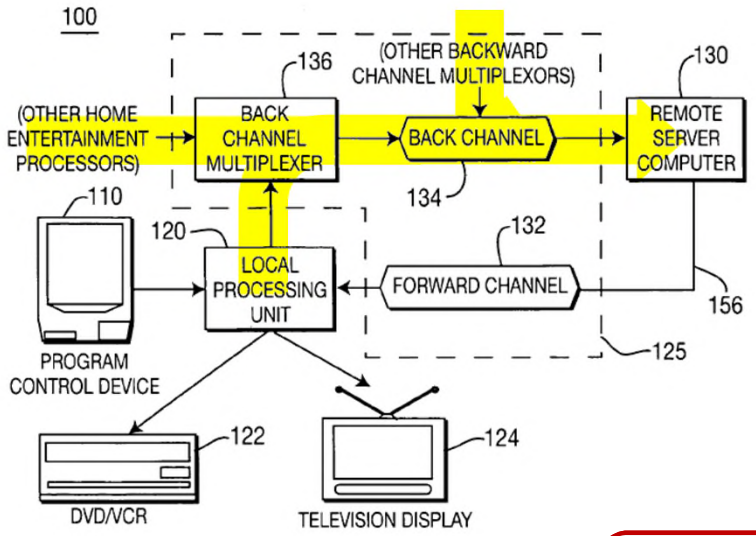


FIG. 1

Undisputed

Ex. 1001

Murdock Fig. 1 (Ex. 1010)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Murdock Alone or in Combination

1. A method of using a back channel containing a multiplicity of identified speech channels from a multiplicity of user sites presented to a speech processing system at a wireline node in a network supporting at least one of cable television delivery and video delivery, comprising the steps of:

receiving said back channel to create a received back channel;

partitioning said received back channel into a multiplicity of received identified speech channels;

processing said multiplicity of said received identified speech channels to create a multiplicity of identified speech content; and

responding to said identified speech content to create an identified speech content response that is unique, for each of said multiplicity of identified speech contents.

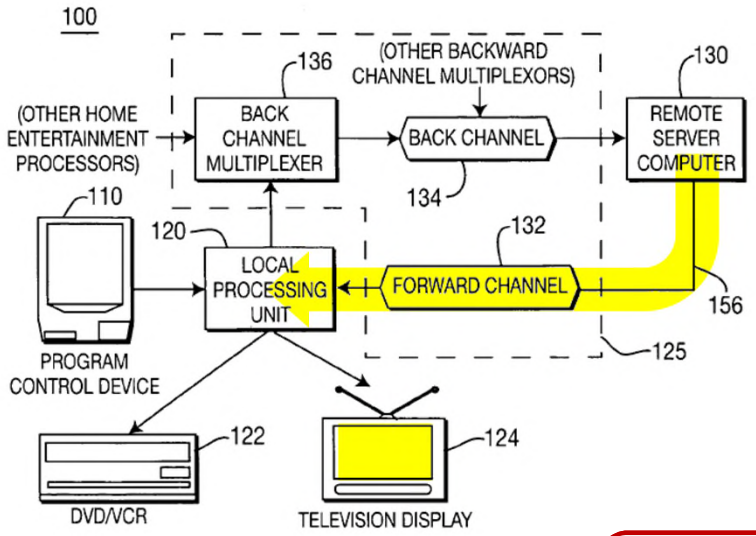


FIG. 1

Undisputed

Ex. 1001

Murdock at Fig. 1 (Ex. 1010)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Murdock Is Prior Art

Petition

Murdock is entitled "System and Method for Providing Programming Content in Response to an Audio Signal." Murdock at cover (Ex. 1010). It was filed on November 16, 2000, and claims priority to a provisional application filed on November 17, 1999. Murdock at cover; Murdock Provisional Application (Ex. 1011).

Paper 1 at 9

Petition

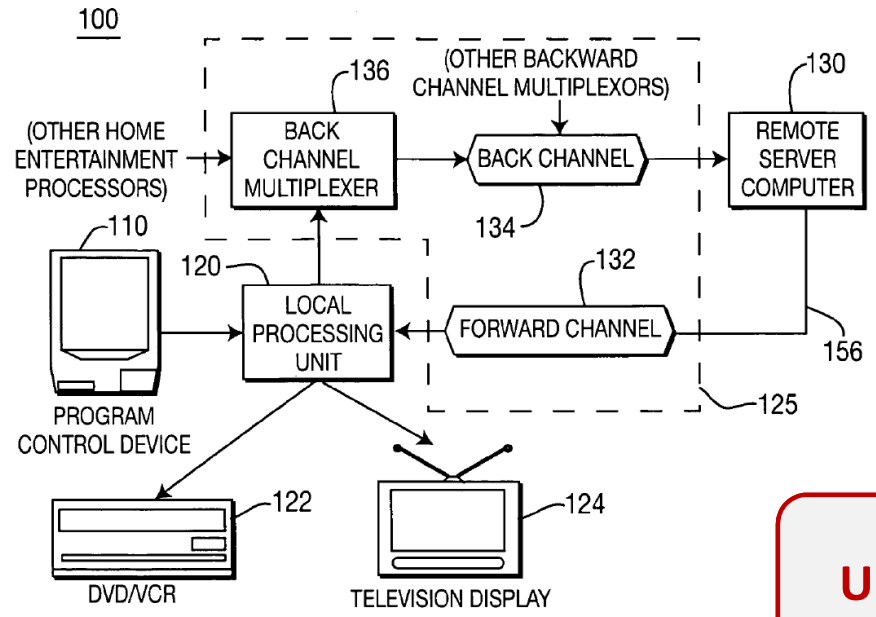
Thus, Murdock is entitled to the benefit of the provisional application's filing date (i.e., November 17, 1999) and is therefore prior art to the '196 Patent under at least 35 U.S.C. § 102(e).

Paper 1 at 10

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

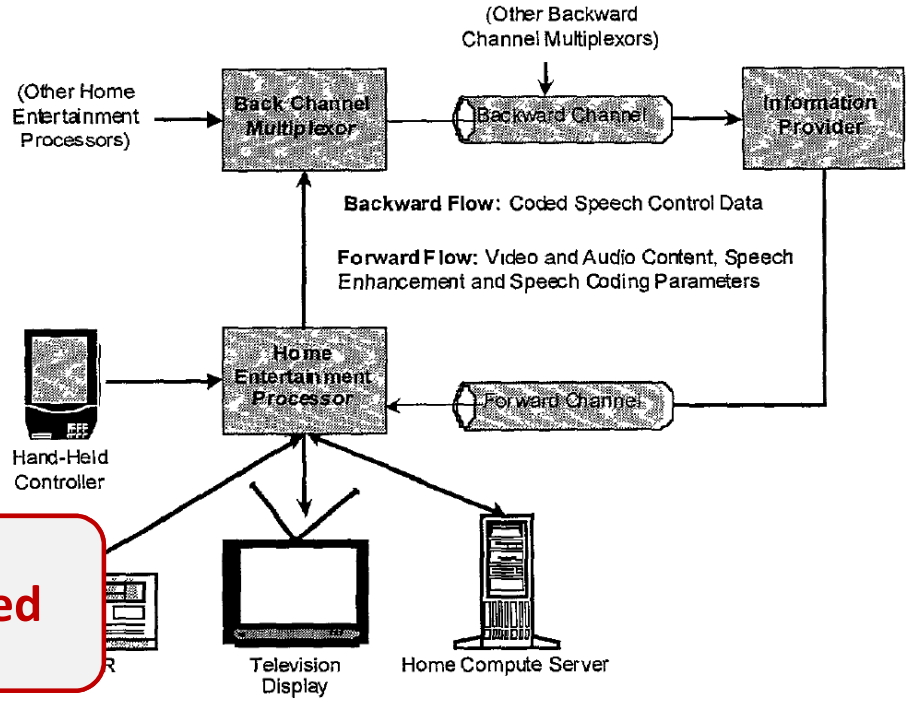
Murdock Is Prior Art

Murdock Patent



Ex. 1010 at Fig. 1

Murdock Provisional Application



Ex. 1011 at Fig. 1

Undisputed

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Murdock Is Prior Art

Dynamic contends that, as part of its petition, it compared the claims of the '196 patent to the disclosure in the Raymond patent. According to Dynamic, it then provided a claim chart in its reply brief to the Board establishing anticipation of claim 1 of the '196 patent by the Raymond provisional application. ….

National Graphics responds that Dynamic only made a conclusory assertion in its petition that Raymond was entitled to an earlier effective date, and the argument is therefore waived. ….

First, we find that Dynamic did not waive its argument that Raymond was entitled to an earlier effective date. As discussed *supra*, Dynamic did not have the burden of producing evidence relating to the Raymond provisional application until after National Graphics made its argument regarding reduction to practice. As a result, it was not necessary for Dynamic to prove in its petition that Raymond was entitled to the filing date of its provisional application. Thus, there was no waiver.

Dynamic Drinkware, LLC v. National Graphics, Inc., 800 F.3d 1375, 1381 (Fed. Cir. 2015)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Murdock Is Prior Art

In this case, Dynamic, as the petitioner, had the burden of persuasion to prove unpatentability by a preponderance of the evidence, and this burden never shifted. Dynamic also had the initial burden of production, and it satisfied that burden by arguing that Raymond anticipated the asserted claims of the '196 patent under § 102(e)(2).

The burden of production then shifted to National Graphics to argue or produce evidence that either Raymond does not actually anticipate, or, as was argued in this case, that Raymond is not prior art because the asserted claims in the '196 patent are entitled to the benefit of a filing date (constructive or otherwise) prior to the filing date of Raymond. ….

As a result, the burden of production returned to Dynamic to prove that either the invention was not actually reduced to practice as argued, or that the Raymond prior art was entitled to the benefit of a filing date prior to the date of National Graphics' reduction to practice.

Dynamic Drinkware, LLC v. National Graphics, Inc., 800 F.3d 1375, 1381 (Fed. Cir. 2015)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

The Challenged Claims
Are Obvious in Light of Julia

The Challenged Claims
Are Obvious in Light of Murdock

Secondary Considerations Do Not Overcome Strong Evidence of Obviousness

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Patent Owner Does Not Establish a Nexus

Patent Owner's Witness Dr. Chaiken

The embodiments described in the '196 patent describe the foundations of the design of the AgileTV solution. The '196 patent describes the initial architecture of the AgileTV solution, which was subsequently extended and improved by AgileTV.

Ex. 2032 ¶ 14

Patent Owner's Witness Dr. Chaiken

By 2003, the AgileTV system architecture partitioned a received back channel to a multiplicity of received identified speech channels, processed those to create a multiplicity of identified speech content, and responded to the multiplicity of identified speech content to create a unique identified speech content response for each identified speech content.

Ex. 2032 ¶ 15

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Patent Owner Does Not Establish a Nexus

Patent Owner's Witness Dr. Chaiken

Q. Did you look at the file history for any of the patents -- any of the three Promptu patents in preparing either your declaration or for today's deposition?

A. When you said -- what do you mean by "filing history"?

Q. Sure. So do you understand what the term "prosecution file history" means?

A. No.

Q. Okay. Did you look at the back-and-forth exchange between Promptu and the Patent Office with respect to the '538 patent --

A. No.

Q. Okay. And what about for the '196 or '326 patents?

A. I -- I -- no. I don't think I had access to them. I don't remember that.

…

Q. … Are you offering an opinion on the legal scope of the claims in the '538 patent?

A. I can't do that, because I'm not an expert in what it -- the scope of claims means.

Ex. 1025 at 115:16-116:16

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

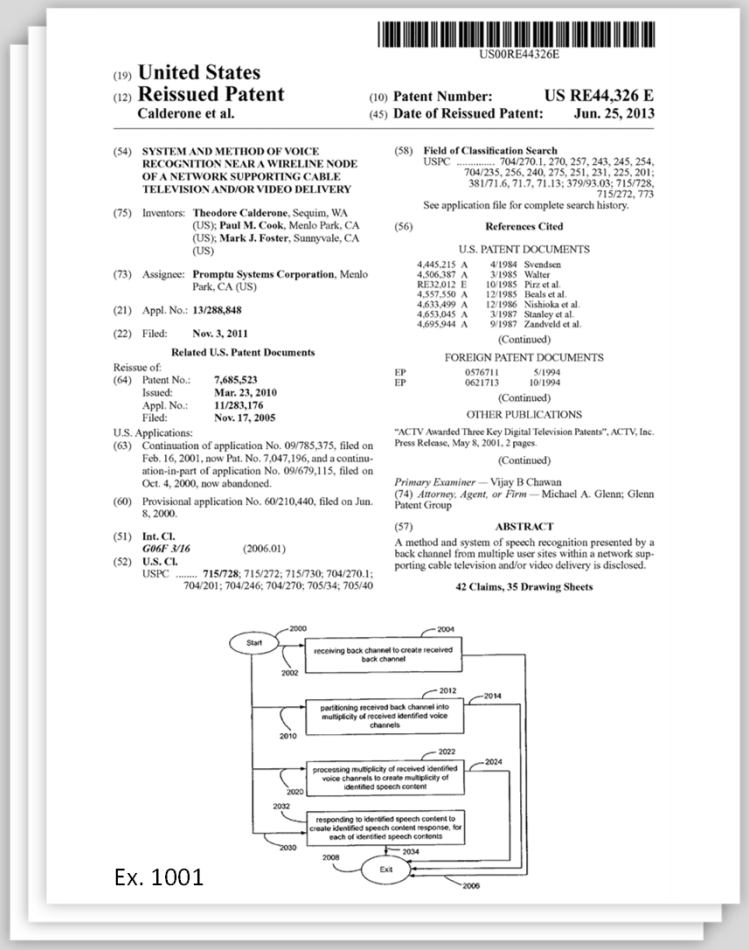
U.S. Patent No. RE44,326

Case IPR2018-00342

Case IPR2018-00343

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

U.S. Patent No. RE44,326



US00RE44326E

(19) **United States**
(12) **Reissued Patent**
Calderone et al.

(10) **Patent Number: US RE44,326 E**
(45) **Date of Reissued Patent: Jun. 25, 2013**

(54) **SYSTEM AND METHOD OF VOICE RECOGNITION NEAR A WIRELINE NODE OF A NETWORK SUPPORTING CABLE TELEVISION AND/OR VIDEO DELIVERY**

(75) Inventors: **Theodore Calderone**, Sequim, WA (US); **Paul M. Cook**, Menlo Park, CA (US); **Mark J. Foster**, Sunnyvale, CA (US)

(73) Assignee: **Promptu Systems Corporation**, Menlo Park, CA (US)

(21) Appl. No.: **13/288,848**

(22) Filed: **Nov. 3, 2011**

Related U.S. Patent Documents

Reissue of:
(64) Patent No.: **7,685,523**
Issued: **Mar. 23, 2010**
Appl. No.: **11/283,176**
Filed: **Nov. 17, 2005**

U.S. Applications:
(63) Continuation of application No. 09/785,375, filed on Feb. 16, 2001, now Pat. No. 7,047,196, and a continuation-in-part of application No. 09/679,115, filed on Oct. 4, 2000, now abandoned.

(60) Provisional application No. 60/210,440, filed on Jun. 8, 2000.

(51) **Int. Cl.**
G06F 3/16 (2006.01)
(52) **U.S. Cl.**
USPC **715/728**; 715/272; 715/730; 704/270.1; 704/201; 704/246; 704/270; 705/34; 705/40

(58) **Field of Classification Search**
USPC 704/270.1, 270, 257, 243, 245, 254, 704/235, 256, 240, 275, 251, 231, 225, 201; 381/71.6, 71.7, 71.13; 379/93.03; 715/728, 715/272, 773
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,445,215	A	4/1984	Svendsen
4,506,387	A	3/1985	Walter
RE32,012	E	10/1985	Pirz et al.
4,557,550	A	12/1985	Beals et al.
4,633,499	A	12/1986	Nishioka et al.
4,653,045	A	3/1987	Stanley et al.
4,695,944	A	9/1987	Zandveld et al.

(Continued)

FOREIGN PATENT DOCUMENTS

EP	0576711	5/1994
EP	0621713	10/1994

(Continued)

OTHER PUBLICATIONS

"ACTV Awarded Three Key Digital Television Patents", ACTV, Inc. Press Release, May 8, 2001, 2 pages.

(Continued)

Primary Examiner — Vijay B Chawan
(74) *Attorney, Agent, or Firm* — Michael A. Glenn; Glenn Patent Group

(57) **ABSTRACT**

A method and system of speech recognition presented by a back channel from multiple user sites within a network supporting cable television and/or video delivery is disclosed.

42 Claims, 35 Drawing Sheets

Ex. 1001

(57) **ABSTRACT**

A method and system of speech recognition presented by a back channel from multiple user sites within a network supporting cable television and/or video delivery is disclosed.

Reissue of:

(64)	Patent No.:	**7,685,523**
	Issued:	**Mar. 23, 2010**
	Appl. No.:	**11/283,176**
	Filed:	**Nov. 17, 2005**

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

The Challenged Claims Are Obvious in Light of Houser

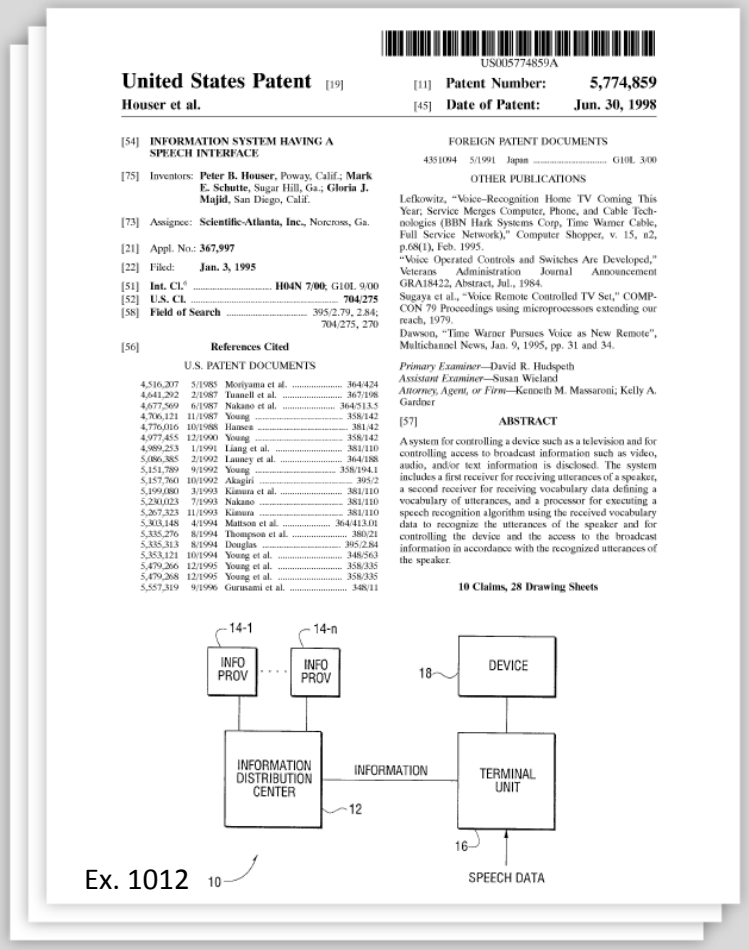
The Challenged Claims Are Obvious in Light of Julia

The Challenged Claims Are Obvious in Light of Murdock

Secondary Considerations Do Not Overcome Strong Evidence of Obviousness

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

U.S. Patent No. 5,774,859 (“Houser”)



US005774859A

United States Patent [19]
Houser et al.

[11] **Patent Number: 5,774,859**
[45] **Date of Patent: Jun. 30, 1998**

[54] **INFORMATION SYSTEM HAVING A SPEECH INTERFACE**

[75] Inventors: **Peter B. Houser**, Poway, Calif.; **Mark E. Schutte**, Sugar Hill, Ga.; **Gloria J. Majid**, San Diego, Calif.

[73] Assignee: **Scientific-Atlanta, Inc.**, Norcross, Ga.

[21] Appl. No.: **367,997**

[22] Filed: **Jan. 3, 1995**

[51] **Int. Cl.**[6] **H04N 7/00**; G10L 9/00
[52] **U.S. Cl.** **704/275**
[58] **Field of Search** 395/2.79, 2.84; 704/275, 270

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,516,207	5/1985	Moriyama et al.	364/424
4,641,292	2/1987	Tunnell et al.	367/198
4,677,569	6/1987	Nakano et al.	364/513.5
4,706,121	11/1987	Young	358/142
4,776,016	10/1988	Hansen	381/42
4,977,455	12/1990	Young	358/142
4,989,253	1/1991	Liang et al.	381/110
5,086,385	2/1992	Launey et al.	364/188
5,151,789	9/1992	Young	358/194.1
5,157,760	10/1992	Akagiri	395/2
5,199,080	3/1993	Kimura et al.	381/110
5,230,023	7/1993	Nakano	381/110
5,267,323	11/1993	Kimura	381/110
5,303,148	4/1994	Mattson et al.	364/413.01
5,335,276	8/1994	Thompson et al.	380/21
5,335,313	8/1994	Douglas	395/2.84
5,353,121	10/1994	Young et al.	348/563
5,479,266	12/1995	Young et al.	358/335
5,479,268	12/1995	Young et al.	358/335
5,557,319	9/1996	Gurusami et al.	348/11

FOREIGN PATENT DOCUMENTS

4351094 5/1991 Japan G10L 3/00

OTHER PUBLICATIONS

Lefkowitz, “Voice-Recognition Home TV Coming This Year; Service Merges Computer, Phone, and Cable Technologies (BBN Hark Systems Corp, Time Warner Cable, Full Service Network),” Computer Shopper, v. 15, n2, p.68(1), Feb. 1995.

“Voice Operated Controls and Switches Are Developed,” Veterans Administration Journal Announcement GRA18422, Abstract, Jul., 1984.

Sugaya et al., “Voice Remote Controlled TV Set,” COMPCON 79 Proceedings using microprocessors extending our reach, 1979.

Dawson, “Time Warner Pursues Voice as New Remote”, Multichannel News, Jan. 9, 1995, pp. 31 and 34.

Primary Examiner—David R. Hudspeth
Assistant Examiner—Susan Wieland
Attorney, Agent, or Firm—Kenneth M. Massaroni; Kelly A. Gardner

[57] **ABSTRACT**

A system for controlling a device such as a television and for controlling access to broadcast information such as video, audio, and/or text information is disclosed. The system includes a first receiver for receiving utterances of a speaker, a second receiver for receiving vocabulary data defining a vocabulary of utterances, and a processor for executing a speech recognition algorithm using the received vocabulary data to recognize the utterances of the speaker and for controlling the device and the access to the broadcast information in accordance with the recognized utterances of the speaker.

10 Claims, 28 Drawing Sheets

Ex. 1012

[54] **INFORMATION SYSTEM HAVING A SPEECH INTERFACE**

[75] Inventors: **Peter B. Houser**, Poway, Calif.; **Mark E. Schutte**, Sugar Hill, Ga.; **Gloria J. Majid**, San Diego, Calif.

[73] Assignee: **Scientific-Atlanta, Inc.**, Norcross, Ga.

[21] Appl. No.: **367,997**

[22] Filed: **Jan. 3, 1995**

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Houser

1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.

The present invention adds a speech recognition interface to a subscriber terminal unit in an information system for implementing spoken control of electronic devices at the subscriber location and of access to information transmitted to the subscriber terminal unit.

Ex. 1001

Houser at 2:19-23 (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Houser

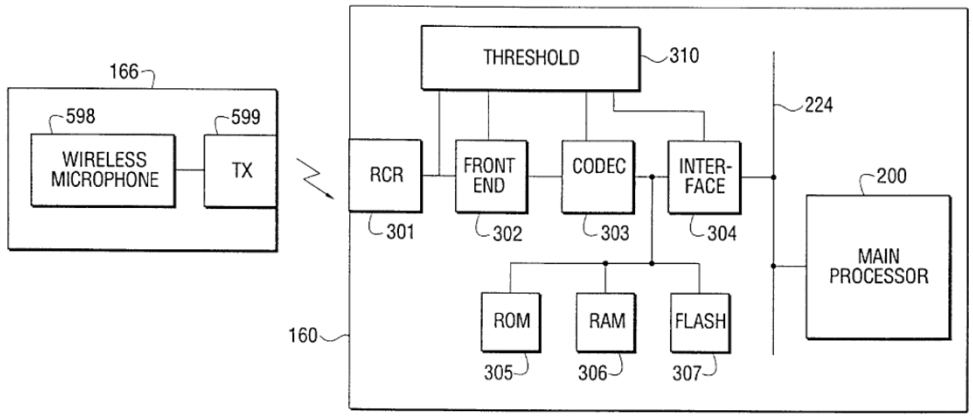
1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.

In accordance with another aspect of the invention, a remote control for transmitting utterance data to a receiver includes a microphone for receiving utterances of a speaker, an analog-to-digital converter for converting utterance signals from the microphone to digital utterance signals, a digital signal processor for extracting time-variant spectral characteristics of the digital utterance signals, and a transmitter for transmitting the time-variant spectral characteristics to the receiver.



Ex. 1001

Houser at 4:16-25 and Fig. 4 (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Houser

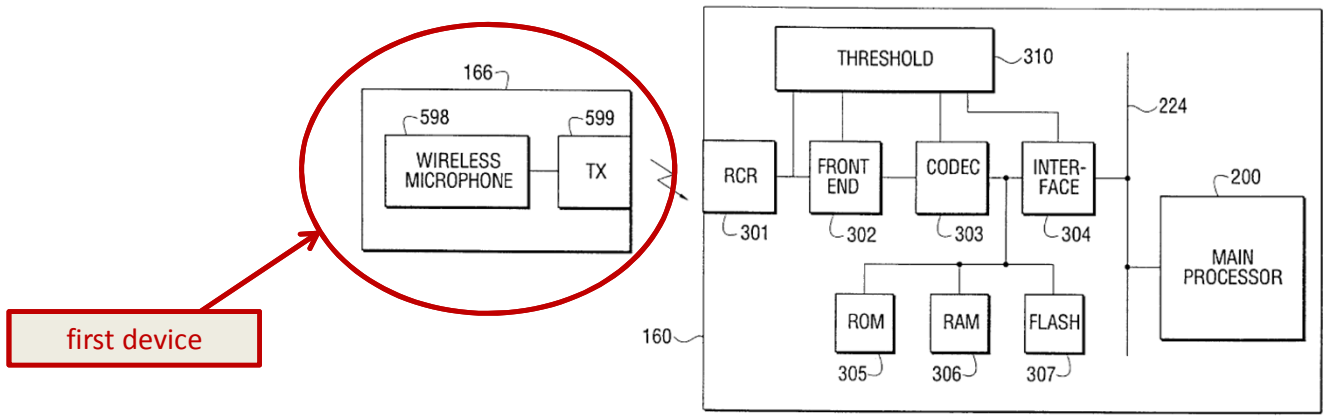
1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.

Various hardware arrangements may be utilized to implement the speech recognition interface. In a first illustrative arrangement shown in FIG. **4**, remote control **166** includes a conventional wireless microphone **598** and a transmitter **599** for transmitting the spoken sounds or words to subscriber terminal unit **160** using RF transmission.



Ex. 1001

Houser at 15:19-24 and Fig. 4 (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Houser

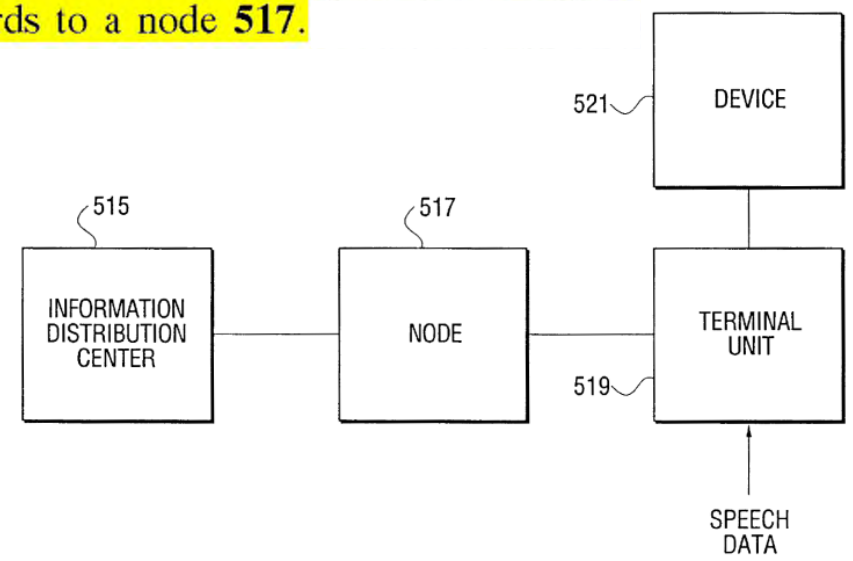
1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.

Other variations to the invention may also be made. For example, although the speech recognition operation is shown in the above embodiments as taking place at the subscriber terminal unit, this processing could take place elsewhere in the system. One variation is shown in FIG. **15** in which a transmitter **515** transmits data representing sounds or spoken words to a node **517**.



Ex. 1001

Houser at 33:49-55 and Fig. 15 (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Houser

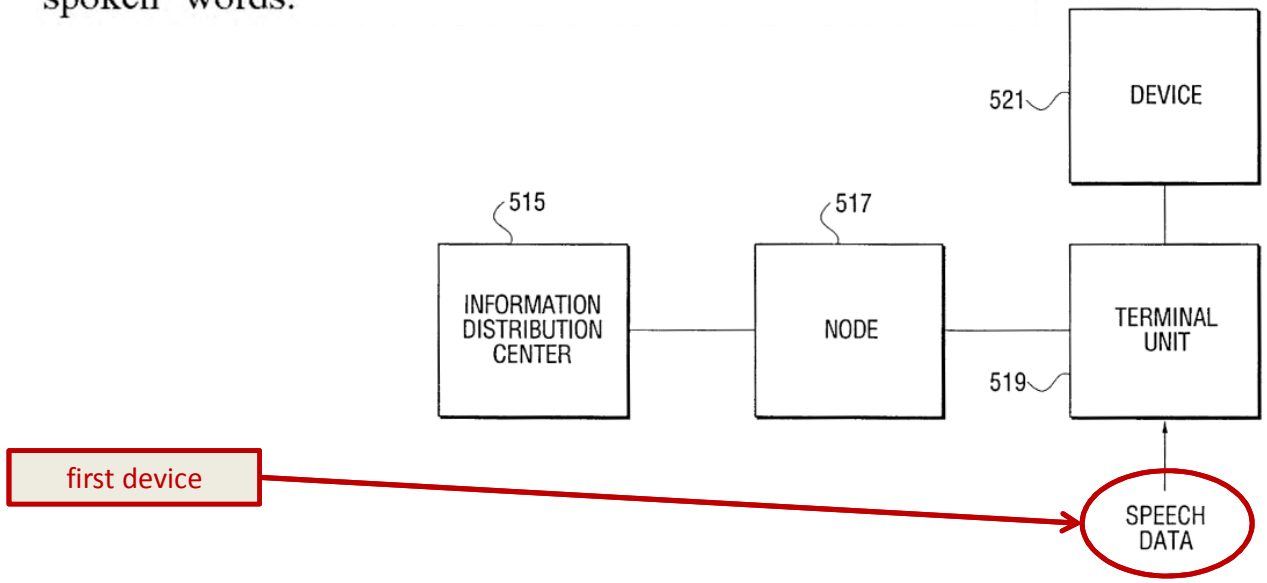
1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.

Sounds or spoken words are received by a subscriber terminal unit **519**. The sounds or spoken words are transmitted from subscriber terminal **519** to node **517** which includes speech recognition circuitry which uses the data transmitted from transmitter **515** to generate commands according to the sounds or spoken words.



Ex. 1001

Houser at 33:55-61 and Fig. 15 (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Houser

1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

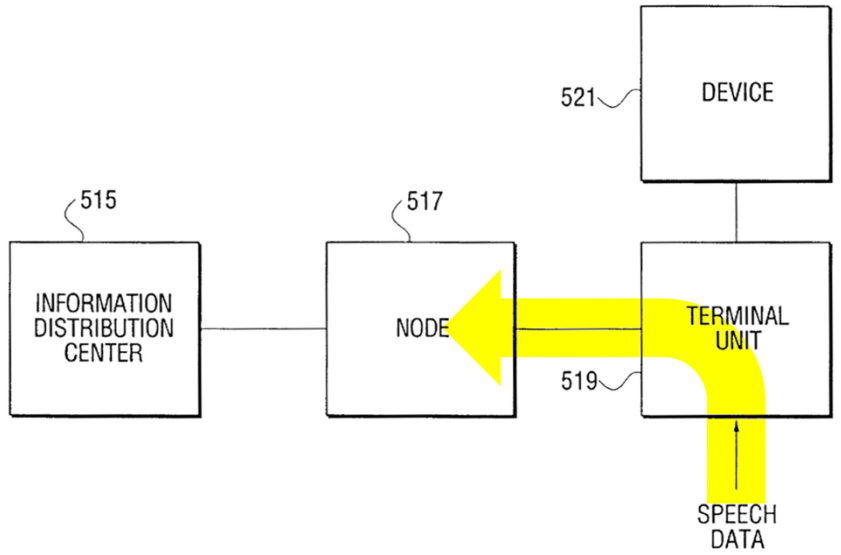
transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.

Petitioner's Expert

Houser discloses the claimed "first network path" from the remote control to the terminal unit and then to node 517.

Ex. 1023 ¶ 136



Houser at Fig. 15 (Ex. 1012)

Ex. 1001

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Houser

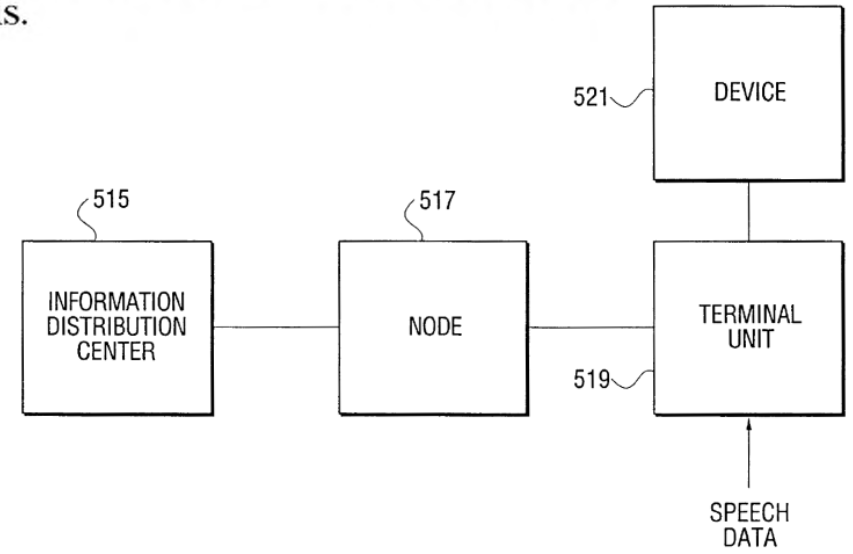
1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.

Node **517** transmits the command(s) to controlled device **521** via subscriber terminal unit **519** to control controlled device **521**. If this arrangement is implemented in a subscription television system, for example, node **517** may be an off-premises device connected to a plurality of subscriber terminal units which access node **517** on a time-sharing basis.



Ex. 1001

Houser at 33:61-67 and Fig. 15 (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Houser

1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

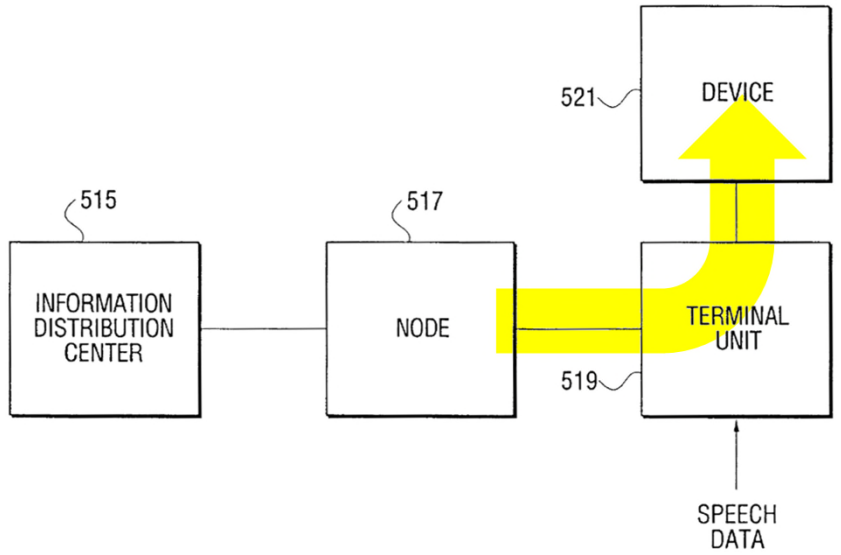
transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.

Petitioner's Expert

In this case, the "second network path" is the path from node 517 through terminal unit 519 to controlled device 521.

Ex. 1023 ¶ 140



Ex. 1001

Houser at Fig. 15 (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Houser

1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

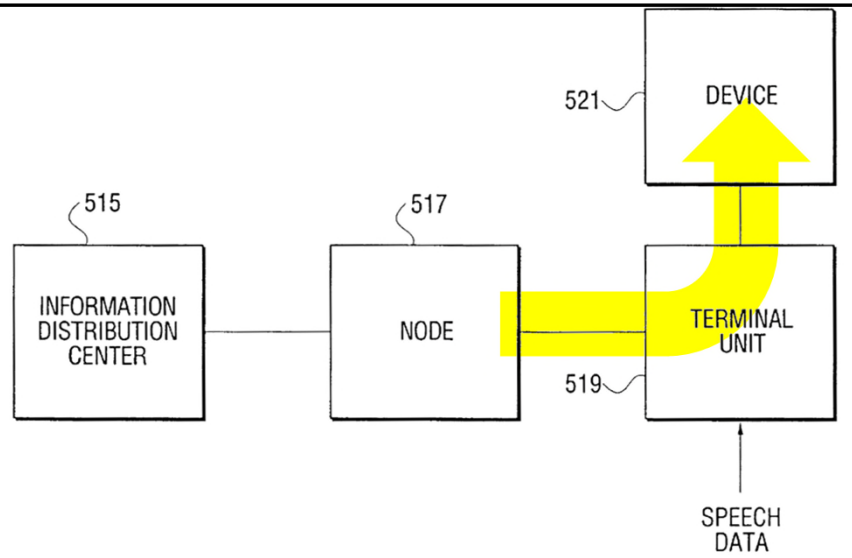
transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.

Petitioner's Expert

I note that because node 517 transmits the recognized commands to device 521 "via subscriber terminal unit 519," the claimed second device could also be terminal unit 519. In that case, the second network path would be the path from node 517 to terminal unit 519.

Ex. 1023 ¶ 141



Ex. 1001

Houser at Fig. 15 (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Houser

1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

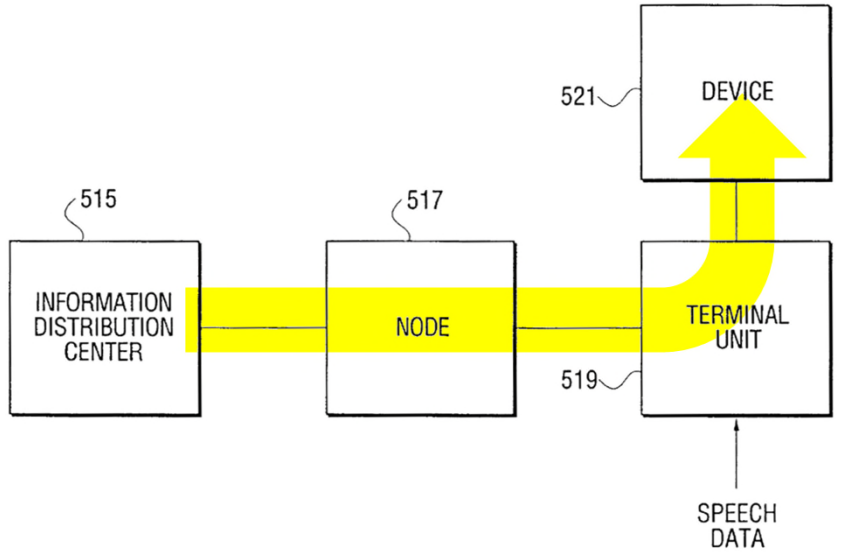
transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.

Petitioner's Expert

As another alternative, Houser also discloses using the recognized speech to deliver information from "information distribution center 515" to "controlled device 521."

Ex. 1023 ¶ 142 (see also ¶¶ 143-144)



Houser at Fig. 15 (Ex. 1012)

Ex. 1001

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

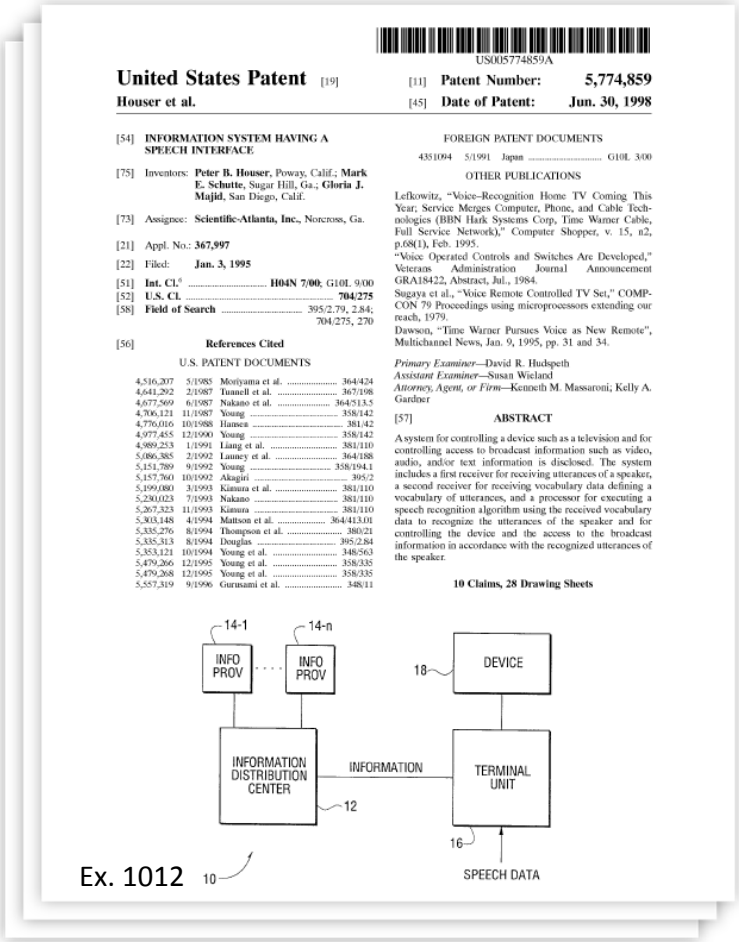
Claim 1 Is Obvious in Light of Houser

1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.



US005774859A

United States Patent [19]
Houser et al.

[11] **Patent Number: 5,774,859**
[45] **Date of Patent: Jun. 30, 1998**

[54] **INFORMATION SYSTEM HAVING A SPEECH INTERFACE**

[75] Inventors: **Peter B. Houser**, Poway, Calif.; **Mark E. Schutte**, Sugar Hill, Ga.; **Gloria J. Majid**, San Diego, Calif.

[73] Assignee: **Scientific-Atlanta, Inc.**, Norcross, Ga.

[21] Appl. No.: **367,997**

[22] Filed: **Jan. 3, 1995**

[51] **Int. Cl.**[6] **H04N 7/00**; G10L 9/00
[52] **U.S. Cl.** **704/275**
[58] **Field of Search** 395/2.79, 2.84; 704/275, 270

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,516,207	5/1985	Moriyama et al.	364/424
4,641,292	2/1987	Tunnell et al.	367/198
4,677,569	6/1987	Nakano et al.	364/513.5
4,706,121	11/1987	Young	358/142
4,776,016	10/1988	Hansen	381/42
4,977,455	12/1990	Young	358/142
4,989,253	1/1991	Liang et al.	381/110
5,086,385	2/1992	Launey et al.	364/188
5,151,789	9/1992	Young	358/194.1
5,157,760	10/1992	Akagiri	395/2
5,199,080	3/1993	Kimura et al.	381/110
5,230,023	7/1993	Nakano	381/110
5,267,323	11/1993	Kimura	381/110
5,303,148	4/1994	Mattson et al.	364/413.01
5,335,276	8/1994	Thompson et al.	380/21
5,335,313	8/1994	Douglas	395/2.84
5,353,121	10/1994	Young et al.	348/563
5,479,266	12/1995	Young et al.	358/335
5,479,268	12/1995	Young et al.	358/335
5,557,319	9/1996	Gurusami et al.	348/11

FOREIGN PATENT DOCUMENTS

4351094 5/1991 Japan G10L 3/00

OTHER PUBLICATIONS

Lefkowitz, "Voice–Recognition Home TV Coming This Year; Service Merges Computer, Phone, and Cable Technologies (BBN Hark Systems Corp, Time Warner Cable, Full Service Network)," Computer Shopper, v. 15, n2, p.68(1), Feb. 1995.

"Voice Operated Controls and Switches Are Developed," Veterans Administration Journal Announcement GRA18422, Abstract, Jul., 1984.

Sugaya et al., "Voice Remote Controlled TV Set," COMPCON 79 Proceedings using microprocessors extending our reach, 1979.

Dawson, "Time Warner Pursues Voice as New Remote", Multichannel News, Jan. 9, 1995, pp. 31 and 34.

Primary Examiner—David R. Hudspeth
Assistant Examiner—Susan Wieland
Attorney, Agent, or Firm—Kenneth M. Massaroni; Kelly A. Gardner

[57] **ABSTRACT**

A system for controlling a device such as a television and for controlling access to broadcast information such as video, audio, and/or text information is disclosed. The system includes a first receiver for receiving utterances of a speaker, a second receiver for receiving vocabulary data defining a vocabulary of utterances, and a processor for executing a speech recognition algorithm using the received vocabulary data to recognize the utterances of the speaker and for controlling the device and the access to the broadcast information in accordance with the recognized utterances of the speaker.

10 Claims, 28 Drawing Sheets

Ex. 1012

Ex. 1001

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 7 Is Obvious in Light of Houser

7. The method of claim 1, further comprising at least one of the steps of:

determining a user site associated with a user of said first device;

determining said associated user site from said recognized speech;

determining said associated user site from said recognized speech and a speaker identification library;

determining said associated user site from said recognized speech and a speech recognition library; and

determining said associated user site from an identification within said speech channel

elsewhere in the system. One variation is shown in FIG. **15** in which a transmitter **515** transmits data representing sounds or spoken words to a node **517**. Sounds or spoken words are received by a subscriber terminal unit **519**. The sounds or spoken words are transmitted from subscriber terminal **519** to node **517** which includes speech recognition circuitry which uses the data transmitted from transmitter **515** to generate commands according to the sounds or spoken words. Node **517** transmits the command(s) to controlled device **521** via subscriber terminal unit **519** to control controlled device **521**. If this arrangement is implemented in a subscription television system, for example, node **517** may be an off-premises device connected to a plurality of subscriber terminal units which access node **517** on a time-sharing basis.

Ex. 1001

Houser at 33:49-67 (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 9 Is Obvious in Light of Houser With Banker or Gordon

9. The method of claim 1, further comprising the steps of:

assessing a response to create a financial consequence identified with a user site;

communicating said financial consequence to said user;

said user confirming said communicated financial consequence to create a financial commitment; and

billing said user based upon said financial commitment.

Ex. 1001

The recognition of program titles also permits pay-per-view purchases to be made by speaking program titles as will be explained with reference to FIG. **14**. If a user selects the "Pay-Per-View" menu item from the main menu of FIG. **12**A using any of the selecting techniques described above, the pay-per-view screen of FIG. **14** is displayed. This screen lists all pay-per-view programs which may be purchased for viewing by the user. The user may then select one of the programs for purchase using any of the selecting techniques described above, including by speaking the title of the program.

Houser at 32:12-22 (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 9 Is Obvious in Light of Houser With Banker or Gordon

9. The method of claim 1, further comprising the steps of:

assessing a response to create a financial consequence identified with a user site;

communicating said financial consequence to said user;

said user confirming said communicated financial consequence to create a financial commitment; and

billing said user based upon said financial commitment.

Ex. 1001

When the terminal of FIG. **3** is in the On mode and tuned to a pay-per-view channel showing an event with its purchase time window open, the user by actuating the BUY key initiates a buy sequence. Consequently, this key is used to purchase an event.

FIG. **1** is a block diagram of a headend for a subscription television system in accordance with the present invention. Billing computer **101** includes a subscriber database and generates a monthly bill for the subscribers in the system based on level of service and any pay-per-view and impulse pay-per-view purchases.

Banker at 16:51-55 and 7:58-63 (Ex. 1016)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 9 Is Obvious in Light of Houser With Banker or Gordon

9. The method of claim 1, further comprising the steps of:

assessing a response to create a financial consequence identified with a user site;

communicating said financial consequence to said user;

said user confirming said communicated financial consequence to create a financial commitment; and

billing said user based upon said financial commitment.

When the subscriber selects a title in step **340**, the title selection, e.g., a program identification (PID), is sent to the video session manager. After receiving a title selection, the video session manager determines, at step **344**, the title price.

As such, through manipulation of the menus, the consumer selects a programming package, becomes a subscriber to that package and is billed accordingly.

Ex. 1001

Gordon at 9:26-31 and 2:60-63 (Ex. 1017)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 9 Is Obvious in Light of Houser With Banker or Gordon

9. The method of claim 1, further comprising the steps of:

assessing a response to create a financial consequence identified with a user site;

communicating said financial consequence to said user;

said user confirming said communicated financial consequence to create a financial commitment; and

billing said user based upon said financial commitment.

Ex. 1001

Petitioner's Expert

A person of ordinary skill in the art would have been motivated to combine Houser with the teachings of either Banker or Gordon to allow users to order pay-per-view content and movies-on-demand by voice.

Ex. 1023 ¶ 233 (citing '326 Patent at 2:11-34, 5:14-18; Houser at Abstract, 32:12-14; Banker at Abstract, 16:51-55; Gordon at 1:8-13, 2:41-63)

Petitioner's Expert

Further, a person of ordinary skill in the art would have recognized the benefit of combining Houser with the teachings of either Banker or Gordon that pertain to known features and functionality of pay-per-view systems including, for example, requiring entry of a secret code and confirming user purchases. Both Banker and Gordon teach user interfaces for implementing pay-per-view and video-on-demand systems on cable networks. The Banker and Gordon approaches reduce the chance of an accidental or unauthorized purchase.

Ex. 1023 ¶ 234 (citing Banker at 16:43-50, 16:51-55, 16:62-17:3, Fig. 6F; Gordon at 2:60-63, 3:61-63, 8:66-10:9, 10:43-46, Figs. 3B, 8)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 12 Is Obvious in Light of Houser

12. A method for speech directed information delivery comprising:

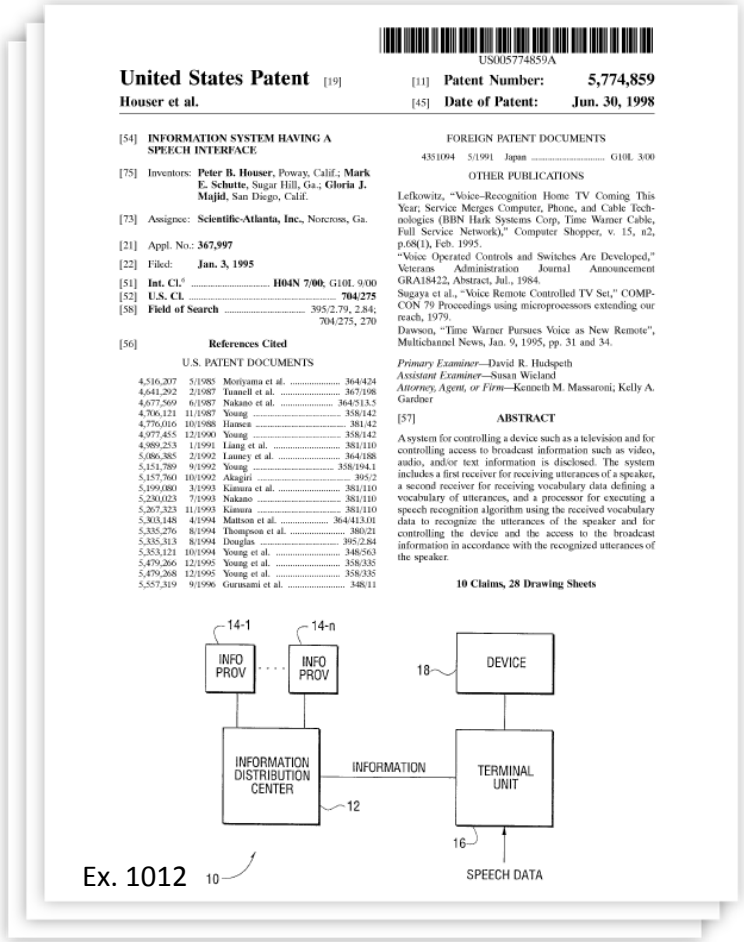
receiving speech information at a first device, wherein said first device is a wireless device;

transferring said speech information in an unrecognized state from said first device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path, wherein said second device is capable of displaying electronically coded and propagated moving or still images and playing electronically coded and propagated audio;

wherein said first network path and said second network path are different.

Ex. 1001



US005774859A

United States Patent [19]
Houser et al.

[11] **Patent Number: 5,774,859**
[45] **Date of Patent: Jun. 30, 1998**

[54] **INFORMATION SYSTEM HAVING A SPEECH INTERFACE**

[75] Inventors: **Peter B. Houser**, Poway, Calif.; **Mark E. Schutte**, Sugar Hill, Ga.; **Gloria J. Majid**, San Diego, Calif.

[73] Assignee: **Scientific-Atlanta, Inc.**, Norcross, Ga.

[21] Appl. No.: **367,997**

[22] Filed: **Jan. 3, 1995**

[51] **Int. Cl.**[6] **H04N 7/00**; G10L 9/00
[52] **U.S. Cl.** **704/275**
[58] **Field of Search** 395/2.79, 2.84; 704/275, 270

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,516,207	5/1985	Moriyama et al.	364/424
4,641,292	2/1987	Tunnell et al.	367/198
4,677,569	6/1987	Nakano et al.	364/513.5
4,706,121	11/1987	Young	358/142
4,776,016	10/1988	Hansen	381/42
4,977,455	12/1990	Young	358/142
4,989,253	1/1991	Liang et al.	381/110
5,086,385	2/1992	Launey et al.	364/188
5,151,789	9/1992	Young	358/194.1
5,157,760	10/1992	Akagiri	395/2
5,199,080	3/1993	Kimura et al.	381/110
5,230,023	7/1993	Nakano	381/110
5,267,323	11/1993	Kimura	381/110
5,303,148	4/1994	Mattson et al.	364/413.01
5,335,276	8/1994	Thompson et al.	380/21
5,335,313	8/1994	Douglas	395/2.84
5,353,121	10/1994	Young et al.	348/563
5,479,266	12/1995	Young et al.	358/335
5,479,268	12/1995	Young et al.	358/335
5,557,319	9/1996	Gurusami et al.	348/11

FOREIGN PATENT DOCUMENTS

4351094 5/1991 Japan G10L 3/00

OTHER PUBLICATIONS

Lefkowitz, "Voice-Recognition Home TV Coming This Year; Service Merges Computer, Phone, and Cable Technologies (BBN Hark Systems Corp, Time Warner Cable, Full Service Network)," Computer Shopper, v. 15, n2, p.68(1), Feb. 1995.

"Voice Operated Controls and Switches Are Developed," Veterans Administration Journal Announcement GRA18422, Abstract, Jul., 1984.

Sugaya et al., "Voice Remote Controlled TV Set," COMPCON 79 Proceedings using microprocessors extending our reach, 1979.

Dawson, "Time Warner Pursues Voice as New Remote", Multichannel News, Jan. 9, 1995, pp. 31 and 34.

Primary Examiner—David R. Hudspeth
Assistant Examiner—Susan Wieland
Attorney, Agent, or Firm—Kenneth M. Massaroni; Kelly A. Gardner

[57] **ABSTRACT**

A system for controlling a device such as a television and for controlling access to broadcast information such as video, audio, and/or text information is disclosed. The system includes a first receiver for receiving utterances of a speaker, a second receiver for receiving vocabulary data defining a vocabulary of utterances, and a processor for executing a speech recognition algorithm using the received vocabulary data to recognize the utterances of the speaker and for controlling the device and the access to the broadcast information in accordance with the recognized utterances of the speaker.

10 Claims, 28 Drawing Sheets

Ex. 1012

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

The Challenged Claims
Are Obvious in Light of Houser

The Challenged Claims
Are Obvious in Light of Julia

The Challenged Claims
Are Obvious in Light of Murdock

Secondary Considerations Do Not
Overcome Strong Evidence of Obviousness

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia

1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.

The present invention addresses the above needs by providing a system, method, and article of manufacture for navigating network-based electronic data sources in response to spoken input requests.

The resulting interpretation of the request is thereupon used to automatically construct an operational navigation query to retrieve the desired information from one or more electronic network data sources, which is then transmitted to a client device of the user.

Ex. 1001

Julia at 2:27-30, 2:36-41 (Ex. 1015)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia

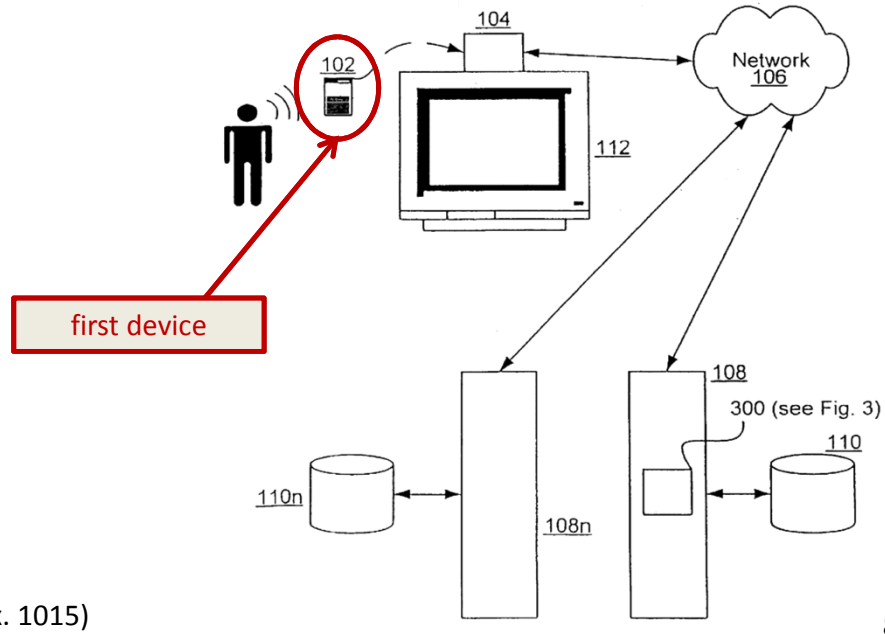
1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.

background noise. In one preferred embodiment well-suited for the home entertainment setting, voice input device **102** is a portable remote control device with an integrated microphone, and the voice data is transmitted from device **102** preferably via infrared (or other wireless) link to communications box **104** (e.g., a set-top box or a similar communications device that is capable of retransmitting the raw voice data and/or processing the voice data) local to the user's environment and coupled to communications network **106**.



Ex. 1001

Julia at 3:45-54 and Fig. 1a (Ex. 1015)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia

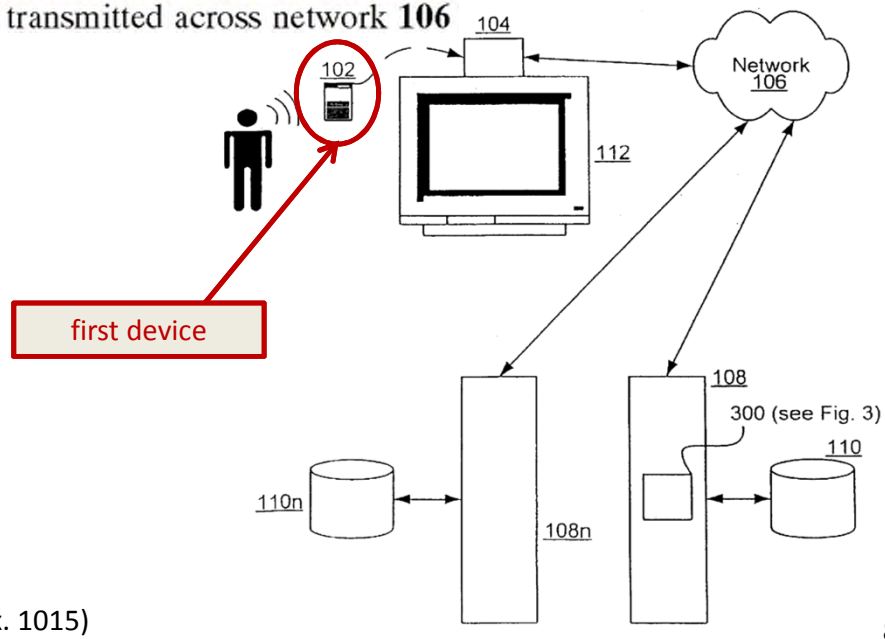
1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.

background noise. In one preferred embodiment well-suited for the home entertainment setting, voice input device **102** is a portable remote control device with an integrated microphone, and the voice data is transmitted from device **102** preferably via infrared (or other wireless) link to communications box **104** (e.g., a set-top box or a similar communications device that is capable of retransmitting the raw voice data and/or processing the voice data) local to the user's environment and coupled to communications network **106**. The voice data is then transmitted across network **106**



Ex. 1001

Julia at 3:45-54 and Fig. 1a (Ex. 1015)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia

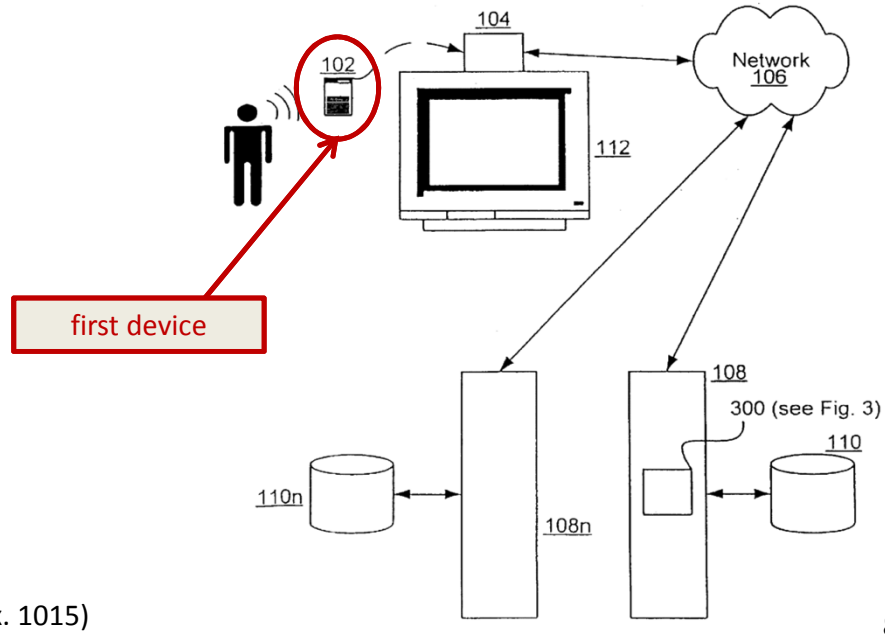
1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.

... the voice data is transmitted from device **102** preferably via infrared (or other wireless) link to communications box **104** (e.g., a set-top box or a similar communications device that is capable of retransmitting the raw voice data and/or processing the voice data) local to the user's environment and coupled to communications network **106**. The voice data is then transmitted across network **106** to a remote server or servers **108**.



Ex. 1001

Julia at 3:45-54 and Fig. 1a (Ex. 1015)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia

1. A method for speech directed information delivery, comprising:

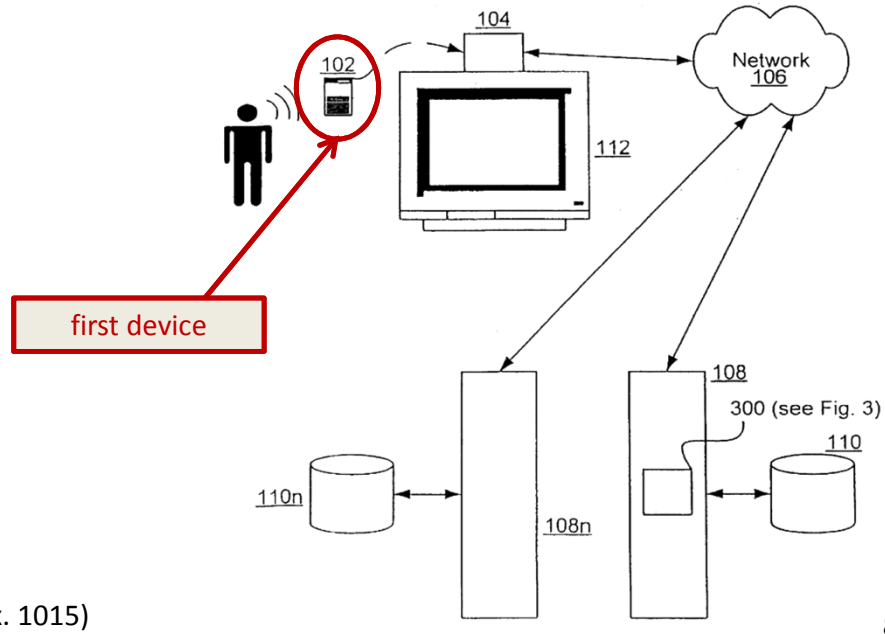
receiving speech information at a first device, wherein said first device is a wireless device;

transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.

Ex. 1001

At remote server **108**, the voice data is processed by request processing logic **300** in order to understand the user's request and construct an appropriate query or request for navigation of remote data source **110**, in accordance with the interpretation process exemplified in FIG. **4** and FIG. **5** and discussed in greater detail below.



Julia at 3:61-66 and Fig. 1a (Ex. 1015)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia

1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

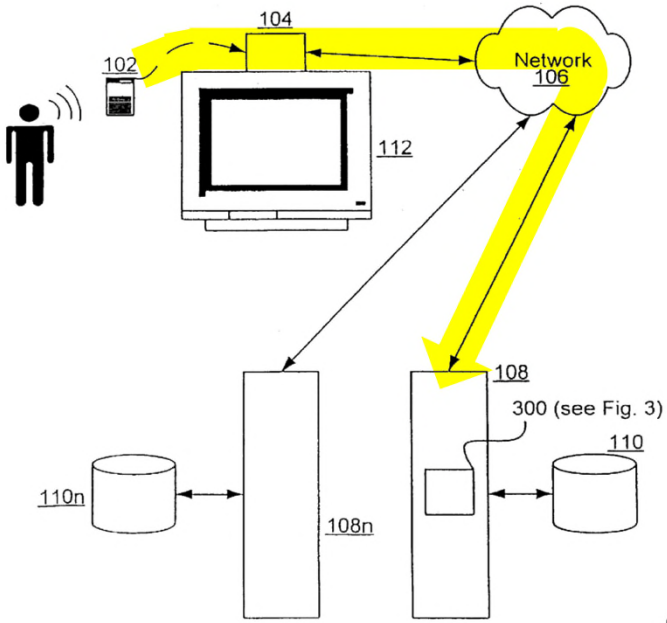
at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.

Ex. 1001

Petitioner's Expert

Julia discloses the claimed "first network path" from the voice device to the communications box and then over the network to a remote server.

Ex. 1023 ¶ 394



Julia at Fig. 1a (Ex. 1015)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia

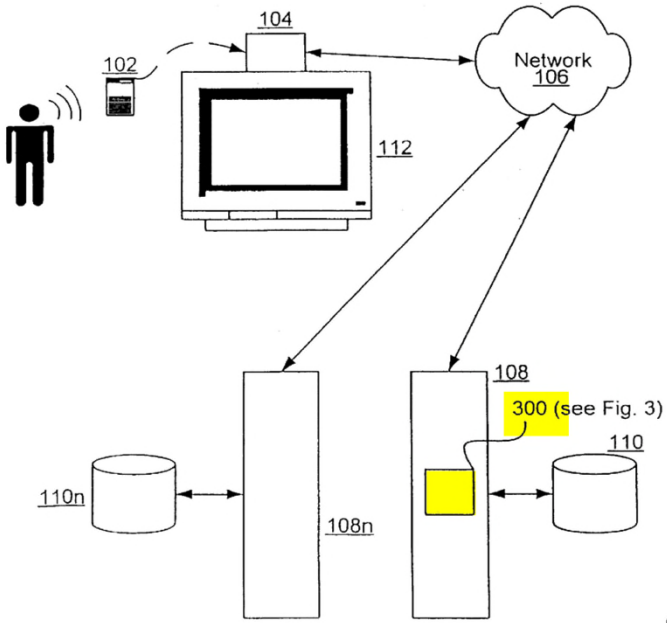
1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.

At remote server **108**, the voice data is processed by request processing logic **300** in order to understand the user's request and construct an appropriate query or request for navigation of remote data source **110**, in accordance with the interpretation process exemplified in FIG. **4** and FIG. **5** and discussed in greater detail below.



Ex. 1001

Julia at 3:61-66 and Fig. 1a (Ex. 1015)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia

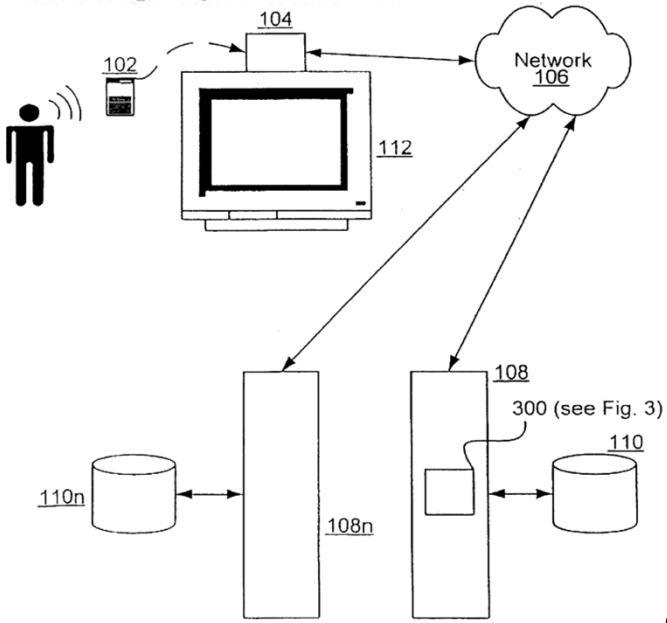
1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.

Once the desired information has been retrieved from data source **110**, it is electronically transmitted via network **106** to the user for viewing on client display device **112**. In a preferred embodiment well-suited for the home entertainment setting, display device **112** is a television monitor or similar audiovisual entertainment device, typically in stationary position for comfortable viewing by users.



Ex. 1001

Julia at 4:18-24 and Fig. 1a (Ex. 1015)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia

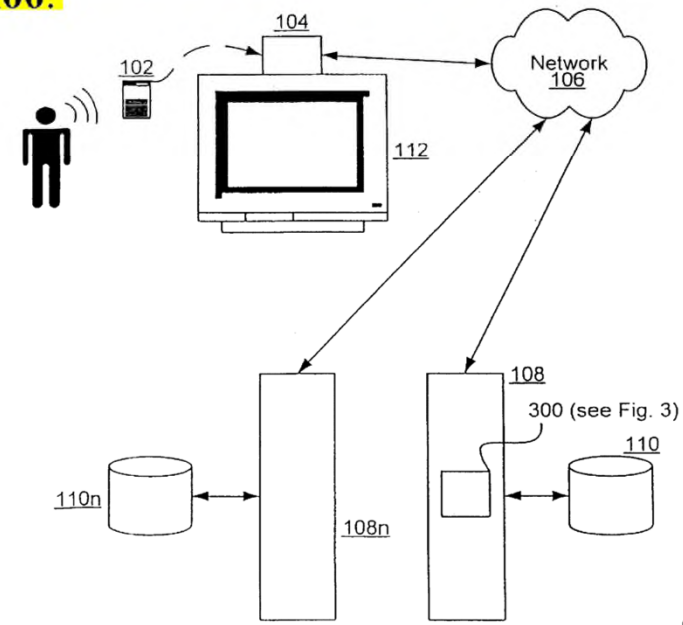
1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.

In addition, in such preferred embodiment, display device **112** is coupled to or integrated with a communications box (which is preferably the same as communications box **104**, but may also be a separate unit) for receiving and decoding/formatting the desired electronic information that is received across communications network **106**.



Julia at 4:24-30 and Fig. 1a (Ex. 1015)

Ex. 1001

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia

1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

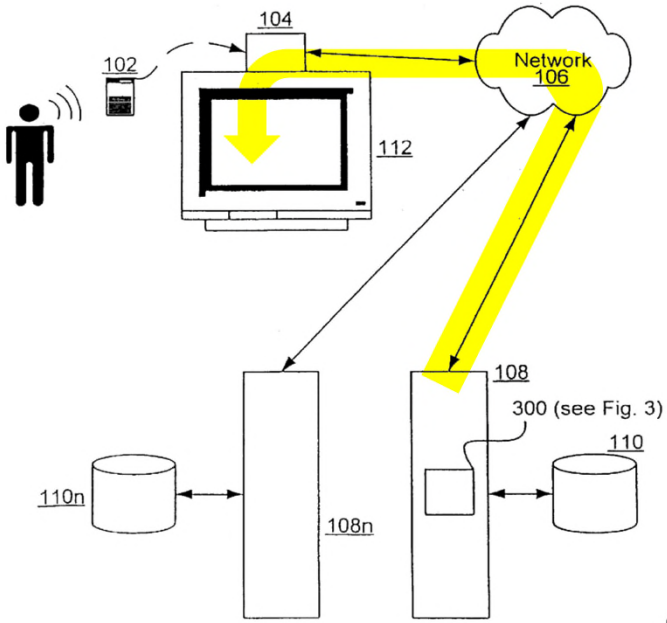
at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.

Ex. 1001

Petitioner's Expert

The "second network path" is the path from remote server 108 through network 106 to communications box 104 and ultimately to client display device 112.

Ex. 1023 ¶ 397



Julia at Fig. 1a (Ex. 1015)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Julia

1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

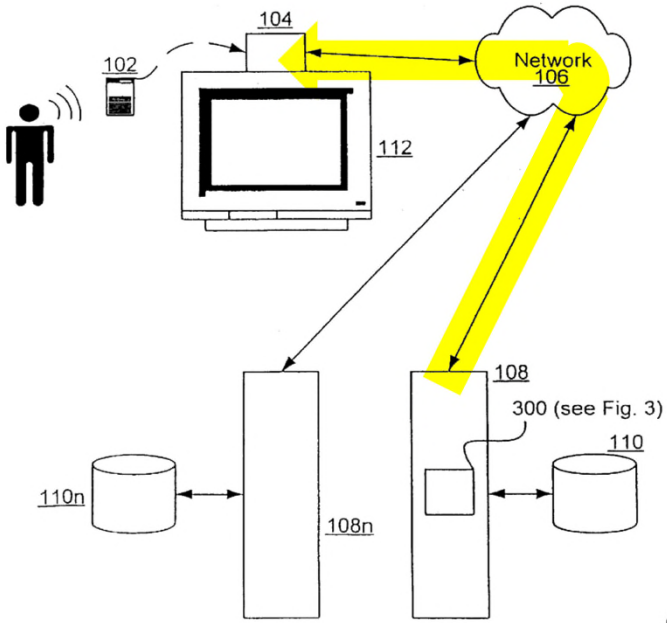
at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.

Ex. 1001

Petitioner's Expert

I note that Julia also discloses "effecting information delivery" from the remote server to the communications box, which can also be the claimed "second device."

Ex. 1023 ¶ 398



Julia at Fig. 1a (Ex. 1015)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

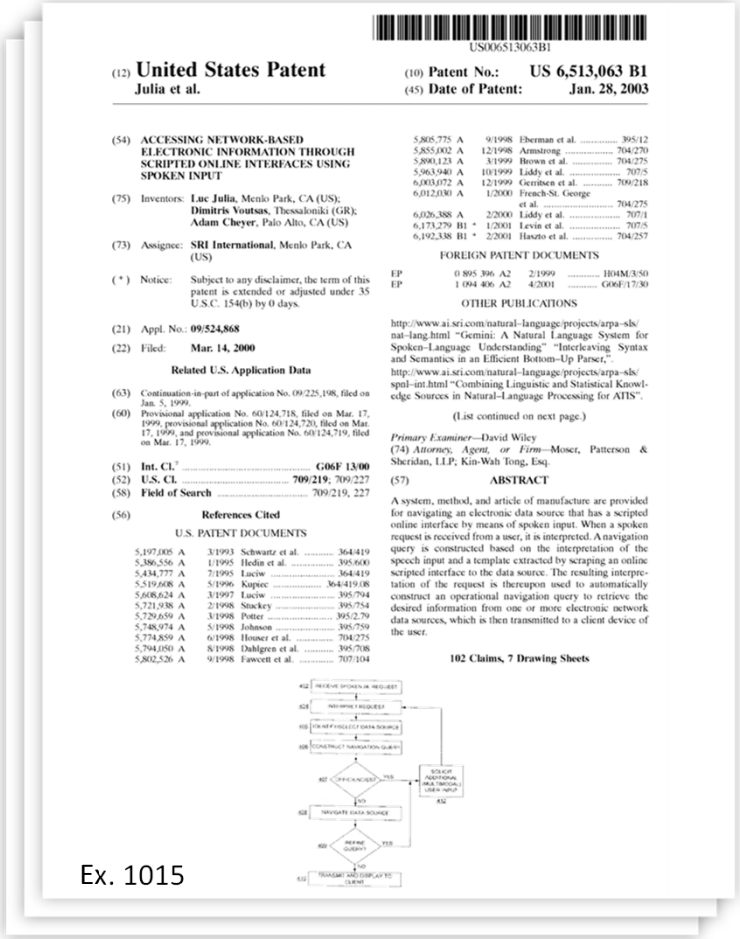
Claim 1 Is Obvious in Light of Julia

1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.



US006513063B1

(12) **United States Patent**
Julia et al.

(10) **Patent No.: US 6,513,063 B1**
(45) **Date of Patent: Jan. 28, 2003**

(54) **ACCESSING NETWORK-BASED ELECTRONIC INFORMATION THROUGH SCRIPTED ONLINE INTERFACES USING SPOKEN INPUT**

(75) Inventors: **Luc Julia**, Menlo Park, CA (US); **Dimitris Voutsas**, Thessaloniki (GR); **Adam Cheyer**, Palo Alto, CA (US)

(73) Assignee: **SRI International**, Menlo Park, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/524,868**

(22) Filed: **Mar. 14, 2000**

Related U.S. Application Data

(63) Continuation-in-part of application No. 09/225,198, filed on Jan. 5, 1999.
(60) Provisional application No. 60/124,718, filed on Mar. 17, 1999, provisional application No. 60/124,720, filed on Mar. 17, 1999, and provisional application No. 60/124,719, filed on Mar. 17, 1999.

(51) **Int. Cl.**[7] **G06F 13/00**
(52) **U.S. Cl.** **709/219**; 709/227
(58) **Field of Search** 709/219, 227

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,197,005 A	3/1993	Schwartz et al.	364/419
5,386,556 A	1/1995	Hedin et al.	395/600
5,434,777 A	7/1995	Luciw	364/419
5,519,608 A	5/1996	Kupiec	364/419.08
5,608,624 A	3/1997	Luciw	395/794
5,721,938 A	2/1998	Stuckey	395/754
5,729,659 A	3/1998	Potter	395/2.79
5,748,974 A	5/1998	Johnson	395/759
5,774,859 A	6/1998	Houser et al.	704/275
5,794,050 A	8/1998	Dahlgren et al.	395/708
5,802,526 A	9/1998	Fawcett et al.	707/104
5,805,775 A	9/1998	Eberman et al.	395/12
5,855,002 A	12/1998	Armstrong	704/270
5,890,123 A	3/1999	Brown et al.	704/275
5,963,940 A	10/1999	Liddy et al.	707/5
6,003,072 A	12/1999	Gerritsen et al.	709/218
6,012,030 A	1/2000	French-St. George et al.	704/275
6,026,388 A	2/2000	Liddy et al.	707/1
6,173,279 B1 *	1/2001	Levin et al.	707/5
6,192,338 B1 *	2/2001	Haszto et al.	704/257

FOREIGN PATENT DOCUMENTS

EP	0 895 396 A2	2/1999	H04M/3/50
EP	1 094 406 A2	4/2001	G06F/17/30

OTHER PUBLICATIONS

http://www.ai.sri.com/natural-language/projects/arpa-sls/nat-lang.html "Gemini: A Natural Language System for Spoken-Language Understanding" "Interleaving Syntax and Semantics in an Efficient Bottom-Up Parser,".
http://www.ai.sri.com/natural-language/projects/arpa-sls/spnl-int.html "Combining Linguistic and Statistical Knowledge Sources in Natural-Language Processing for ATIS".

(List continued on next page.)

Primary Examiner—David Wiley
(74) *Attorney, Agent, or Firm*—Moser, Patterson & Sheridan, LLP; Kin-Wah Tong, Esq.

(57) **ABSTRACT**

A system, method, and article of manufacture are provided for navigating an electronic data source that has a scripted online interface by means of spoken input. When a spoken request is received from a user, it is interpreted. A navigation query is constructed based on the interpretation of the speech input and a template extracted by scraping an online scripted interface to the data source. The resulting interpretation of the request is thereupon used to automatically construct an operational navigation query to retrieve the desired information from one or more electronic network data sources, which is then transmitted to a client device of the user.

102 Claims, 7 Drawing Sheets

Ex. 1015

Ex. 1001

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 7 Is Obvious in Light of Julia

7. The method of claim 1, further comprising at least one of the steps of:

determining a user site associated with a user of said first device;

determining said associated user site from said recognized speech;

determining said associated user site from said recognized speech and a speaker identification library;

determining said associated user site from said recognized speech and a speech recognition library; and

determining said associated user site from an identification within said speech channel

Ex. 1001

As illustrated in FIG. **2**, multiple users, each having their own client input device, may issue requests, simultaneously or otherwise, for navigation of data source **210**. This is equally true (though not explicitly drawn) for the embodiments depicted in FIGS. **1***a* and **1***b*.

Once the desired information has been retrieved from data source **110**, it is electronically transmitted via network **106** to the user for viewing on client display device **112**. In a

Julia at 6:12-16 and 4:18-20 (Ex. 1015)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 9 Is Obvious in Light of Julia With Gordon or Banker

9. The method of claim 1, further comprising the steps of:

assessing a response to create a financial consequence identified with a user site;

communicating said financial consequence to said user;

said user confirming said communicated financial consequence to create a financial commitment; and

billing said user based upon said financial commitment.

Further, practitioners may choose to implement the each of the various embodiments described above on any number of different hardware and software computing platforms and environments and various combinations thereof, including, by way of just a few examples: a general-purpose hardware microprocessor such as the Intel Pentium series; operating system software such as Microsoft Windows/CE, Palm OS, or Apple Mac OS (particularly for client devices and client-side processing), or Unix, Linux, or Windows/NT (the latter three particularly for network data servers and server-side processing), and/or proprietary information access platforms such as Microsoft's WebTV or the Diva Systems video-on-demand system.

Ex. 1001

Julia at 6:47-59 (Ex. 1015)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 9 Is Obvious in Light of Julia With Gordon or Banker

9. The method of claim 1, further comprising the steps of:

assessing a response to create a financial consequence identified with a user site;

communicating said financial consequence to said user;

said user confirming said communicated financial consequence to create a financial commitment; and

billing said user based upon said financial commitment.

Ex. 1001

Petitioner's Expert

A person of ordinary skill in the art would have naturally considered Banker or Gordon in connection with the system disclosed by Julia. Indeed, Julia's disclosure of implementation on "the Diva Systems video-on-demand system" specifically suggests Gordon, which is a Diva Systems patent.

Ex. 1023 ¶ 484

system software such as Microsoft Windows/CE, Palm OS, or Apple Mac OS (particularly for client devices and client-side processing), or Unix, Linux, or Windows/NT (the latter three particularly for network data servers and server-side processing), and/or proprietary information access platforms such as Microsoft's WebTV or the Diva Systems video-on-demand system.

Julia at 6:47-59 (Ex. 1015)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 9 Is Obvious in Light of Julia With Gordon or Banker

9. The method of claim 1, further comprising the steps of:

assessing a response to create a financial consequence identified with a user site;

communicating said financial consequence to said user;

said user confirming said communicated financial consequence to create a financial commitment; and

billing said user based upon said financial commitment.

When the subscriber selects a title in step **340**, the title selection, e.g., a program identification (PID), is sent to the video session manager. After receiving a title selection, the video session manager determines, at step **344**, the title price.

As such, through manipulation of the menus, the consumer selects a programming package, becomes a subscriber to that package and is billed accordingly.

Ex. 1001

Gordon at 9:26-31 and 2:60-63 (Ex. 1017)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 9 Is Obvious in Light of Julia With Gordon or Banker

9. The method of claim 1, further comprising the steps of:

assessing a response to create a financial consequence identified with a user site;

communicating said financial consequence to said user;

said user confirming said communicated financial consequence to create a financial commitment; and

billing said user based upon said financial commitment.

When the terminal of FIG. **3** is in the On mode and tuned to a pay-per-view channel showing an event with its purchase time window open, the user by actuating the BUY key initiates a buy sequence. Consequently, this key is used to purchase an event.

FIG. **1** is a block diagram of a headend for a subscription television system in accordance with the present invention. Billing computer **101** includes a subscriber database and generates a monthly bill for the subscribers in the system based on level of service and any pay-per-view and impulse pay-per-view purchases.

Ex. 1001

Banker at 16:51-55 and 7:58-63 (Ex. 1016)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 9 Is Obvious in Light of Julia With Gordon or Banker

9. The method of claim 1, further comprising the steps of:

assessing a response to create a financial consequence identified with a user site;

communicating said financial consequence to said user;

said user confirming said communicated financial consequence to create a financial commitment; and

billing said user based upon said financial commitment.

Ex. 1001

Petitioner's Expert

A person of ordinary skill in the art would have been motivated to combine the teachings of either Banker or Gordon with the Julia system to allow users to order pay-per-view content and movies-on-demand by voice.

Ex. 1023 ¶ 484 (citing '326 Patent at 2:11-34, 5:14-18; Julia at 1:30-43, 3:36-60, 6:47-59, Fig 1a; Banker at Abstract, 16:51-55; Gordon at 1:8-14, 2:41-63)

Petitioner's Expert

Further, a person of ordinary skill in the art would have recognized the benefit of combining Julia with the teachings of either Banker or Gordon that pertain to known features and functionality of pay-per-view systems including, for example, requiring entry of a secret code and confirming user purchases. Both Banker and Gordon teach user interfaces for implementing pay-per-view and video-on-demand systems on cable networks. The Banker and Gordon approaches reduce the chance of an accidental or unauthorized purchase.

Ex. 1023 ¶ 485 (citing Banker at 16:43-50, 16:51-55, 16:62-17:3, Fig. 6F; Gordon at 2:60-63, 3:61-63, 8:66-10:9, 10:43-46, Figs. 3B, 8)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 12 Is Obvious in Light of Julia

12. A method for speech directed information delivery comprising:

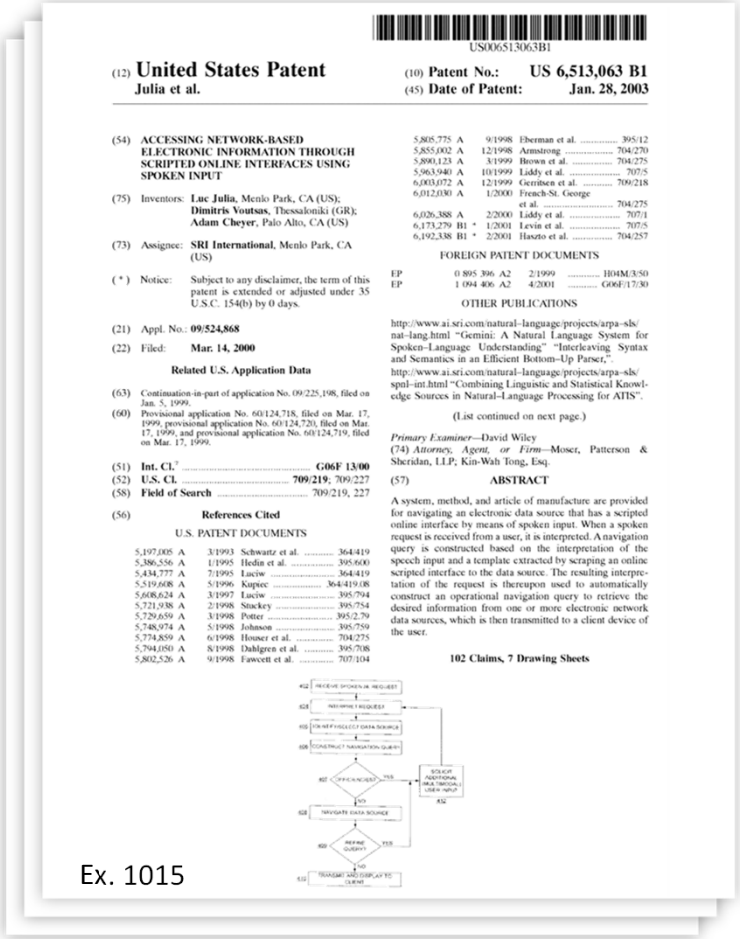
receiving speech information at a first device, wherein said first device is a wireless device;

transferring said speech information in an unrecognized state from said first device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path, wherein said second device is capable of displaying electronically coded and propagated moving or still images and playing electronically coded and propagated audio;

wherein said first network path and said second network path are different.

Ex. 1001



US006513063B1

(12) **United States Patent**
Julia et al.

(10) **Patent No.: US 6,513,063 B1**
(45) **Date of Patent: Jan. 28, 2003**

(54) **ACCESSING NETWORK-BASED ELECTRONIC INFORMATION THROUGH SCRIPTED ONLINE INTERFACES USING SPOKEN INPUT**

(75) Inventors: **Luc Julia**, Menlo Park, CA (US); **Dimitris Voutsas**, Thessaloniki (GR); **Adam Cheyer**, Palo Alto, CA (US)

(73) Assignee: **SRI International**, Menlo Park, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/524,868**

(22) Filed: **Mar. 14, 2000**

Related U.S. Application Data

(63) Continuation-in-part of application No. 09/225,198, filed on Jan. 5, 1999.

(60) Provisional application No. 60/124,718, filed on Mar. 17, 1999, provisional application No. 60/124,720, filed on Mar. 17, 1999, and provisional application No. 60/124,719, filed on Mar. 17, 1999.

(51) **Int. Cl.**[7] **G06F 13/00**
(52) **U.S. Cl.** **709/219**; 709/227
(58) **Field of Search** 709/219, 227

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,197,005	A	3/1993	Schwartz et al.	364/419
5,386,556	A	1/1995	Hedin et al.	395/600
5,434,777	A	7/1995	Luciw	364/419
5,519,608	A	5/1996	Kupiec	364/419.08
5,608,624	A	3/1997	Luciw	395/794
5,721,938	A	2/1998	Stuckey	395/754
5,729,659	A	3/1998	Potter	395/2.79
5,748,974	A	5/1998	Johnson	395/759
5,774,859	A	6/1998	Houser et al.	704/275
5,794,050	A	8/1998	Dahlgren et al.	395/708
5,802,526	A	9/1998	Fawcett et al.	707/104
5,805,775	A	9/1998	Eberman et al.	395/12
5,855,002	A	12/1998	Armstrong	704/270
5,890,123	A	3/1999	Brown et al.	704/275
5,963,940	A	10/1999	Liddy et al.	707/5
6,003,072	A	12/1999	Gerritsen et al.	709/218
6,012,030	A	1/2000	French-St. George et al.	704/275
6,026,388	A	2/2000	Liddy et al.	707/1
6,173,279	B1 *	1/2001	Levin et al.	707/5
6,192,338	B1 *	2/2001	Haszto et al.	704/257

FOREIGN PATENT DOCUMENTS

EP	0 895 396 A2	2/1999	H04M/3/50
EP	1 094 406 A2	4/2001	G06F/17/30

OTHER PUBLICATIONS

http://www.ai.sri.com/natural-language/projects/arpa-sls/nat-lang.html "Gemini: A Natural Language System for Spoken-Language Understanding" "Interleaving Syntax and Semantics in an Efficient Bottom-Up Parser,".
http://www.ai.sri.com/natural-language/projects/arpa-sls/spnl-int.html "Combining Linguistic and Statistical Knowledge Sources in Natural-Language Processing for ATIS".

(List continued on next page.)

Primary Examiner—David Wiley
(74) *Attorney, Agent, or Firm*—Moser, Patterson & Sheridan, LLP; Kin-Wah Tong, Esq.

(57) **ABSTRACT**

A system, method, and article of manufacture are provided for navigating an electronic data source that has a scripted online interface by means of spoken input. When a spoken request is received from a user, it is interpreted. A navigation query is constructed based on the interpretation of the speech input and a template extracted by scraping an online scripted interface to the data source. The resulting interpretation of the request is thereupon used to automatically construct an operational navigation query to retrieve the desired information from one or more electronic network data sources, which is then transmitted to a client device of the user.

102 Claims, 7 Drawing Sheets

Ex. 1015

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

The Challenged Claims
Are Obvious in Light of Houser

The Challenged Claims
Are Obvious in Light of Julia

The Challenged Claims
Are Obvious in Light of Murdock

Secondary Considerations Do Not
Overcome Strong Evidence of Obviousness

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Murdock Alone or in Combination

1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.

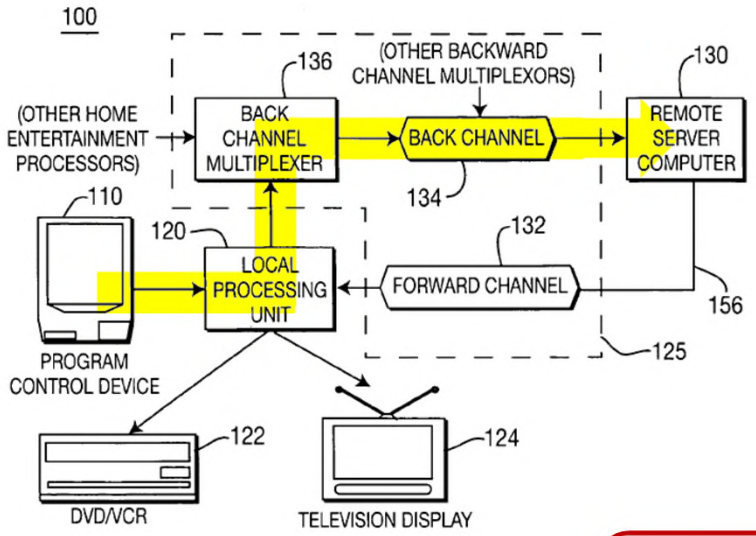


FIG. 1

Undisputed

Ex. 1001

Murdock at Fig. 1 (Ex. 1013)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Claim 1 Is Obvious in Light of Murdock Alone or in Combination

1. A method for speech directed information delivery, comprising:

receiving speech information at a first device, wherein said first device is a wireless device;

transferring said speech information from said first wireless device via a first network path to a speech recognition engine; and

at said speech recognition engine, recognizing said speech information and effecting information delivery to a second device via a second network path.

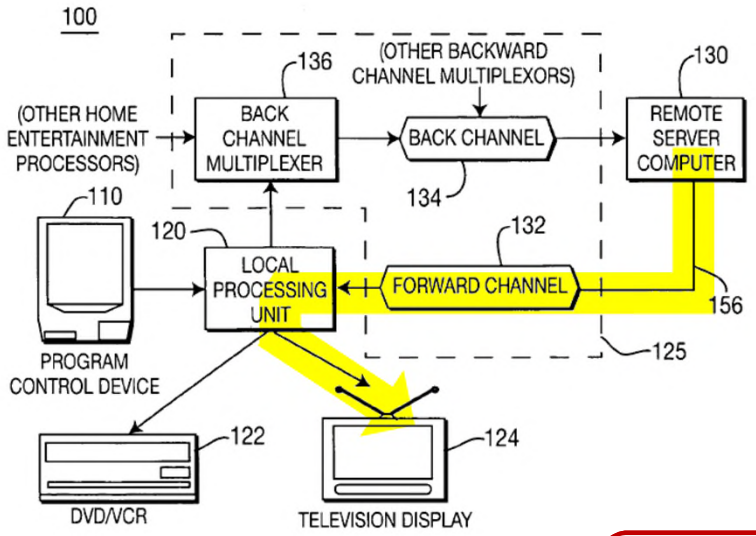


FIG. 1

Undisputed

Ex. 1001

Murdock at Fig. 1 (Ex. 1013)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Murdock Is Prior Art

Petition

Murdock is entitled "System and Method for Providing Programming Content in Response to an Audio Signal." Murdock at cover (Ex. 1013). Murdock was filed on November 16, 2000, and claims priority to a provisional application filed on November 17, 1999. Murdock at cover; Murdock Provisional Application (Ex. 1014).

Paper 12 at 11

Petition

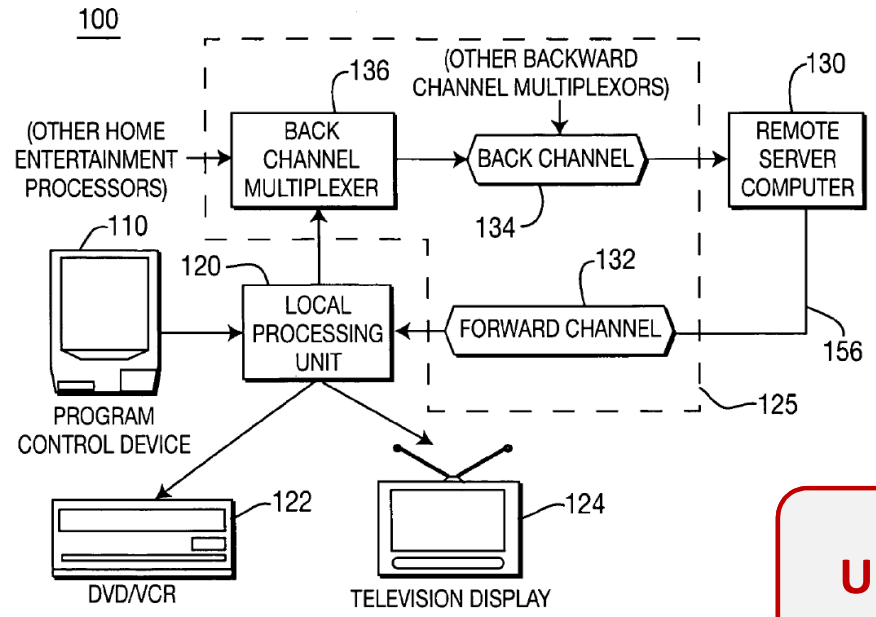
Thus, Murdock is entitled to the benefit of the provisional application's filing date (i.e., November 17, 1999) and is therefore prior art to the '326 Patent under at least 35 U.S.C. § 102(e).

Paper 12 at 12

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

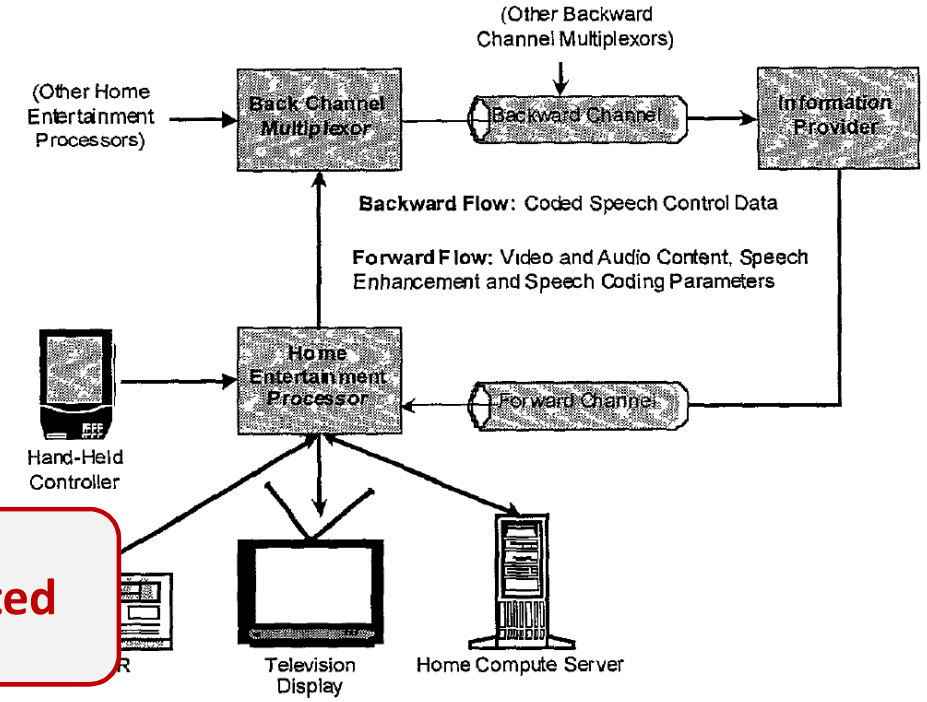
Murdock Is Prior Art

Murdock Patent



Ex. 1013 at Fig. 1

Murdock Provisional Application



Ex. 1014 at Fig. 1

Undisputed

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Murdock Is Prior Art

Dynamic contends that, as part of its petition, it compared the claims of the '196 patent to the disclosure in the Raymond patent. According to Dynamic, it then provided a claim chart in its reply brief to the Board establishing anticipation of claim 1 of the '196 patent by the Raymond provisional application. ….

National Graphics responds that Dynamic only made a conclusory assertion in its petition that Raymond was entitled to an earlier effective date, and the argument is therefore waived. ….

First, we find that Dynamic did not waive its argument that Raymond was entitled to an earlier effective date. As discussed *supra*, Dynamic did not have the burden of producing evidence relating to the Raymond provisional application until after National Graphics made its argument regarding reduction to practice. As a result, it was not necessary for Dynamic to prove in its petition that Raymond was entitled to the filing date of its provisional application. Thus, there was no waiver.

Dynamic Drinkware, LLC v. National Graphics, Inc., 800 F.3d 1375, 1381 (Fed. Cir. 2015)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

The Challenged Claims
Are Obvious in Light of Houser

The Challenged Claims
Are Obvious in Light of Julia

The Challenged Claims
Are Obvious in Light of Murdock

Secondary Considerations Do Not
Overcome Strong Evidence of Obviousness

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Patent Owner Does Not Establish a Nexus

Patent Owner's Witness Dr. Chaiken

The embodiments described in the '326 patent describe the foundations of the design of the AgileTV solution. The '326 patent describes the initial architecture of the AgileTV solution, which was subsequently extended and improved by AgileTV.

Ex. 2032 ¶ 14

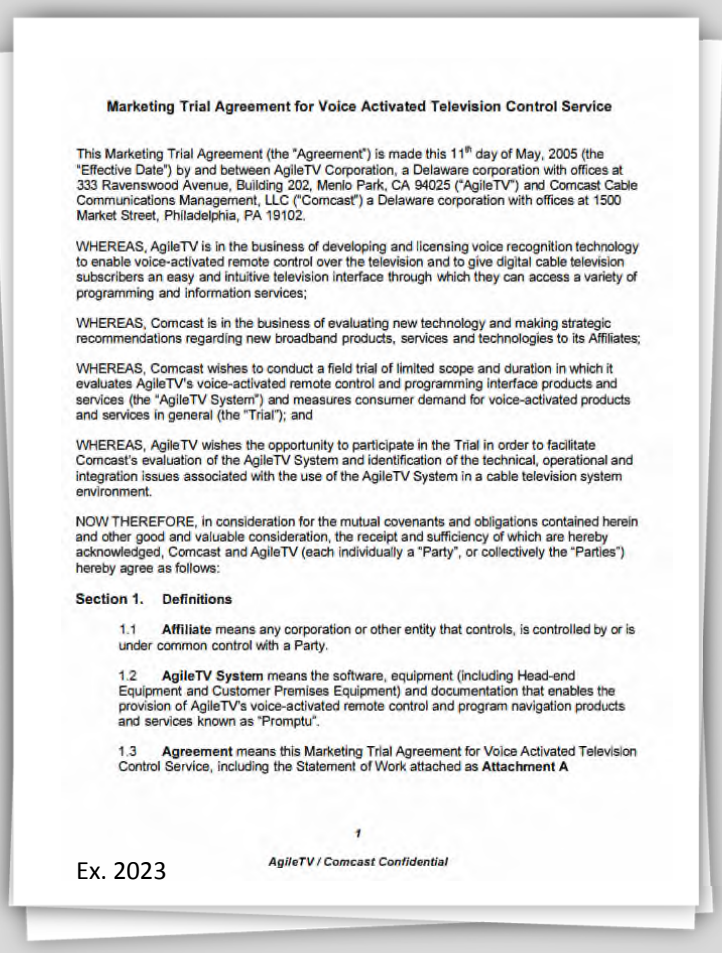
Patent Owner's Witness Dr. Chaiken

By 2003, the AgileTV system architecture used a first network path to transfer speech information to a speech recognition engine, which recognized the speech information and affected what is delivered via a second network path.

Ex. 2032 ¶ 15

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Comcast Evaluated the AgileTV Product



Marketing Trial Agreement for Voice Activated Television Control Service

This Marketing Trial Agreement (the "Agreement") is made this 11th day of May, 2005 (the "Effective Date") by and between AgileTV Corporation, a Delaware corporation with offices at 333 Ravenswood Avenue, Building 202, Menlo Park, CA 94025 ("AgileTV") and Comcast Cable Communications Management, LLC ("Comcast") a Delaware corporation with offices at 1500 Market Street, Philadelphia, PA 19102.

WHEREAS, AgileTV is in the business of developing and licensing voice recognition technology to enable voice-activated remote control over the television and to give digital cable television subscribers an easy and intuitive television interface through which they can access a variety of programming and information services;

WHEREAS, Comcast is in the business of evaluating new technology and making strategic recommendations regarding new broadband products, services and technologies to its Affiliates;

WHEREAS, Comcast wishes to conduct a field trial of limited scope and duration in which it evaluates AgileTV's voice-activated remote control and programming interface products and services (the "AgileTV System") and measures consumer demand for voice-activated products and services in general (the "Trial"); and

WHEREAS, AgileTV wishes the opportunity to participate in the Trial in order to facilitate Comcast's evaluation of the AgileTV System and identification of the technical, operational and integration issues associated with the use of the AgileTV System in a cable television system environment.

NOW THEREFORE, in consideration for the mutual covenants and obligations contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Comcast and AgileTV (each individually a "Party", or collectively the "Parties") hereby agree as follows:

Section 1. Definitions

1.1 **Affiliate** means any corporation or other entity that controls, is controlled by or is under common control with a Party.

1.2 **AgileTV System** means the software, equipment (including Head-end Equipment and Customer Premises Equipment) and documentation that enables the provision of AgileTV's voice-activated remote control and program navigation products and services known as "Promptu".

1.3 **Agreement** means this Marketing Trial Agreement for Voice Activated Television Control Service, including the Statement of Work attached as **Attachment A**

1

AgileTV / Comcast Confidential

Ex. 2023

Marketing Trial Agreement for Voice Activated Television Control Service

This Marketing Trial Agreement (the "Agreement") is made this 11th day of May, 2005 (the "Effective Date") by and between AgileTV Corporation, a Delaware corporation with offices at 333 Ravenswood Avenue, Building 202, Menlo Park, CA 94025 ("AgileTV") and Comcast Cable Communications Management, LLC ("Comcast") a Delaware corporation with offices at 1500 Market Street, Philadelphia, PA 19102.

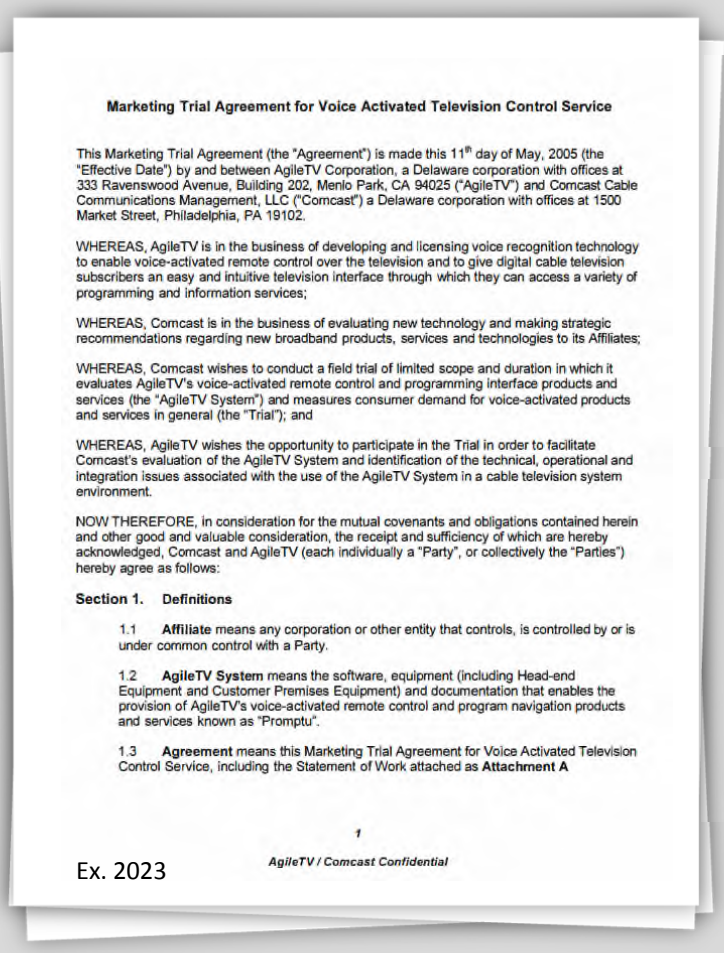
WHEREAS, Comcast wishes to conduct a field trial of limited scope and duration in which it evaluates AgileTV's voice-activated remote control and programming interface products and services (the "AgileTV System") and measures consumer demand for voice-activated products and services in general (the "Trial"); and

WHEREAS, AgileTV wishes the opportunity to participate in the Trial in order to facilitate Comcast's evaluation of the AgileTV System and identification of the technical, operational and integration issues associated with the use of the AgileTV System in a cable television system environment.

Ex. 2023 at 1

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Comcast Evaluated the AgileTV Product



Marketing Trial Agreement for Voice Activated Television Control Service

This Marketing Trial Agreement (the "Agreement") is made this 11th day of May, 2005 (the "Effective Date") by and between AgileTV Corporation, a Delaware corporation with offices at 333 Ravenswood Avenue, Building 202, Menlo Park, CA 94025 ("AgileTV") and Comcast Cable Communications Management, LLC ("Comcast") a Delaware corporation with offices at 1500 Market Street, Philadelphia, PA 19102.

WHEREAS, AgileTV is in the business of developing and licensing voice recognition technology to enable voice-activated remote control over the television and to give digital cable television subscribers an easy and intuitive television interface through which they can access a variety of programming and information services;

WHEREAS, Comcast is in the business of evaluating new technology and making strategic recommendations regarding new broadband products, services and technologies to its Affiliates;

WHEREAS, Comcast wishes to conduct a field trial of limited scope and duration in which it evaluates AgileTV's voice-activated remote control and programming interface products and services (the "AgileTV System") and measures consumer demand for voice-activated products and services in general (the "Trial"); and

WHEREAS, AgileTV wishes the opportunity to participate in the Trial in order to facilitate Comcast's evaluation of the AgileTV System and identification of the technical, operational and integration issues associated with the use of the AgileTV System in a cable television system environment.

NOW THEREFORE, in consideration for the mutual covenants and obligations contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Comcast and AgileTV (each individually a "Party", or collectively the "Parties") hereby agree as follows:

Section 1. Definitions

1.1 **Affiliate** means any corporation or other entity that controls, is controlled by or is under common control with a Party.

1.2 **AgileTV System** means the software, equipment (including Head-end Equipment and Customer Premises Equipment) and documentation that enables the provision of AgileTV's voice-activated remote control and program navigation products and services known as "Promptu".

1.3 **Agreement** means this Marketing Trial Agreement for Voice Activated Television Control Service, including the Statement of Work attached as **Attachment A**

1

AgileTV / Comcast Confidential

Ex. 2023

II. Scope and Objectives

The Trial will be conducted in the Trial Cable System, located in Willow Grove, PA. Comcast will attempt to recruit approximately 275 customers to participate in this trial and intends to begin the trial on or around May 11, 2005. The trial will last approximately 6 months. This statement of work will address both marketing and technical objectives.

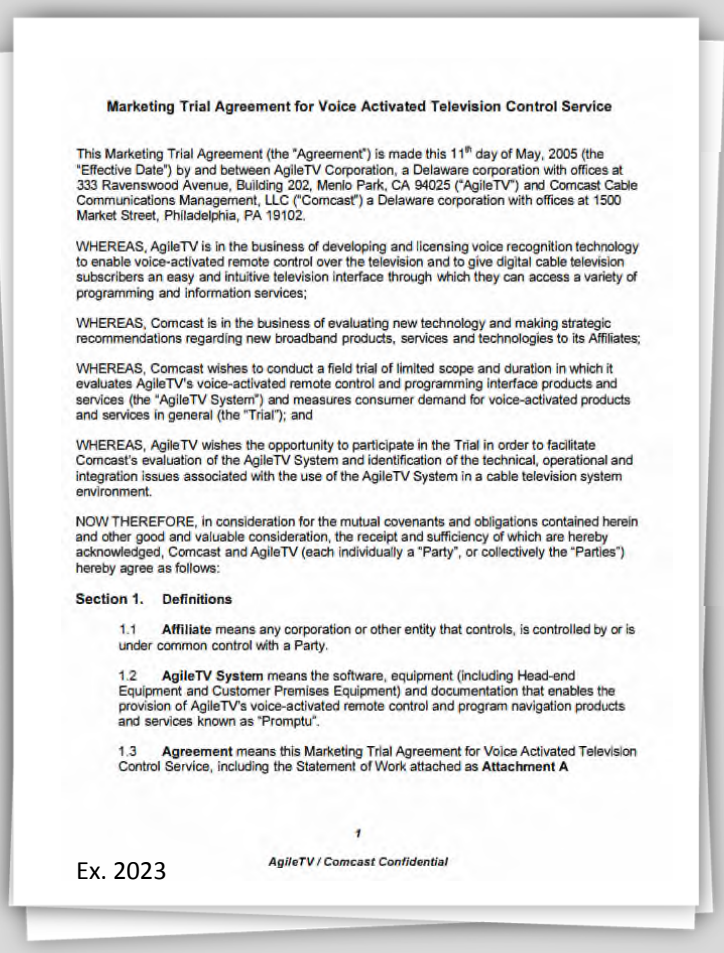
Ex. 2023 at 20

2.6 **Limitations**. In the event the Parties agree to conduct a commercial deployment of the AgileTV System, the Parties will enter a separate written agreement that sets forth the terms and conditions applicable to such deployment. This Agreement does not contemplate anything beyond the limited trial discussed herein and does not constitute a promise or commitment to move beyond such trial.

Ex. 2023 at 4

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Comcast Evaluated the AgileTV Product



Marketing Trial Agreement for Voice Activated Television Control Service

This Marketing Trial Agreement (the "Agreement") is made this 11th day of May, 2005 (the "Effective Date") by and between AgileTV Corporation, a Delaware corporation with offices at 333 Ravenswood Avenue, Building 202, Menlo Park, CA 94025 ("AgileTV") and Comcast Cable Communications Management, LLC ("Comcast") a Delaware corporation with offices at 1500 Market Street, Philadelphia, PA 19102.

WHEREAS, AgileTV is in the business of developing and licensing voice recognition technology to enable voice-activated remote control over the television and to give digital cable television subscribers an easy and intuitive television interface through which they can access a variety of programming and information services;

WHEREAS, Comcast is in the business of evaluating new technology and making strategic recommendations regarding new broadband products, services and technologies to its Affiliates;

WHEREAS, Comcast wishes to conduct a field trial of limited scope and duration in which it evaluates AgileTV's voice-activated remote control and programming interface products and services (the "AgileTV System") and measures consumer demand for voice-activated products and services in general (the "Trial"); and

WHEREAS, AgileTV wishes the opportunity to participate in the Trial in order to facilitate Comcast's evaluation of the AgileTV System and identification of the technical, operational and integration issues associated with the use of the AgileTV System in a cable television system environment.

NOW THEREFORE, in consideration for the mutual covenants and obligations contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Comcast and AgileTV (each individually a "Party", or collectively the "Parties") hereby agree as follows:

Section 1. Definitions

1.1 **Affiliate** means any corporation or other entity that controls, is controlled by or is under common control with a Party.

1.2 **AgileTV System** means the software, equipment (including Head-end Equipment and Customer Premises Equipment) and documentation that enables the provision of AgileTV's voice-activated remote control and program navigation products and services known as "Promptu".

1.3 **Agreement** means this Marketing Trial Agreement for Voice Activated Television Control Service, including the Statement of Work attached as **Attachment A**

1

AgileTV / Comcast Confidential

Ex. 2023

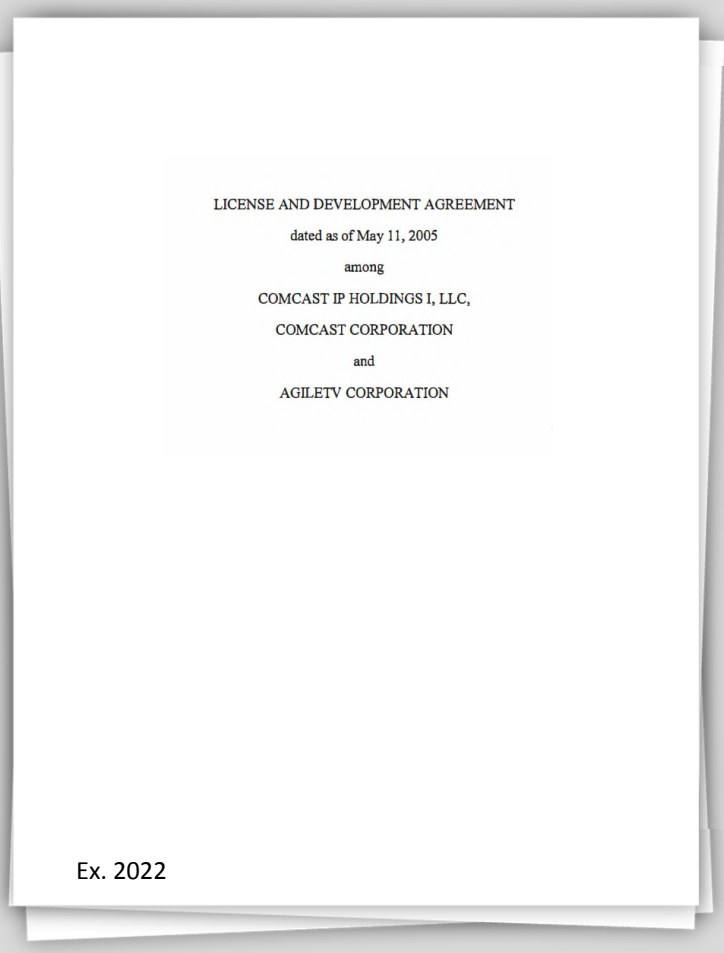
3.2 **Licenses and Rights to Use**. AgileTV will be responsible for obtaining all software, licenses, consents, waivers and approvals with respect to the AgileTV system that are necessary to install and operate the AgileTV System in the Trial Cable System and to provide the Promptu Service to the Trial Customers.

3.3 **Integration and Adaptation**. AgileTV, at its own cost, will perform all necessary engineering to adapt the AgileTV System to the Comcast Trial Cable System head-end environment as set forth in greater detail in the applicable Statement of Work.

Ex. 2023 at 5

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Comcast Evaluated the AgileTV Product



LICENSE AND DEVELOPMENT AGREEMENT

dated as of May 11, 2005

among

COMCAST IP HOLDINGS I, LLC,

COMCAST CORPORATION

and

AGILETV CORPORATION

Ex. 2022

RECITALS

AgileTV and certain Affiliates of Comcast are currently engaged in a trial of certain of AgileTV's products and services related to the AgileTV Technology.

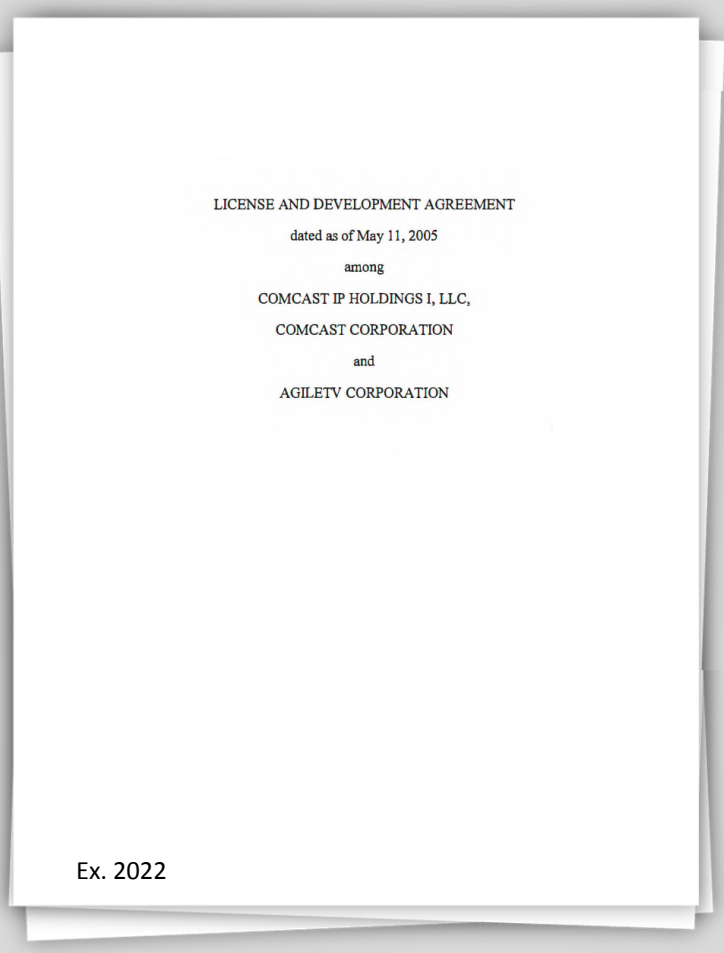
An Affiliate of Comcast has agreed to lend to AgileTV, and AgileTV has agreed to borrow from such Comcast Affiliate, certain funds (the "**Loan**") pursuant to the terms of that certain Note Purchase Agreement of even date herewith between such Comcast Affiliate and AgileTV and the Senior Convertible Promissory Note issued by AgileTV thereunder (collectively, the "**Loan Documents**"), in order to provide AgileTV with additional capital for its trial with Comcast and its Affiliates and for its development efforts with respect to products and services to be developed by AgileTV for deployment by Comcast and its Affiliates.

In connection with such trial and Loan, AgileTV desires to grant to Comcast certain rights in and licenses to AgileTV's technologies, products, services and Intellectual Property Rights.

Ex. 2022 at 3 of 78

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Comcast Evaluated the AgileTV Product



LICENSE AND DEVELOPMENT AGREEMENT

dated as of May 11, 2005

among

COMCAST IP HOLDINGS I, LLC,

COMCAST CORPORATION

and

AGILETV CORPORATION

Ex. 2022

(a) AgileTV Patent License.

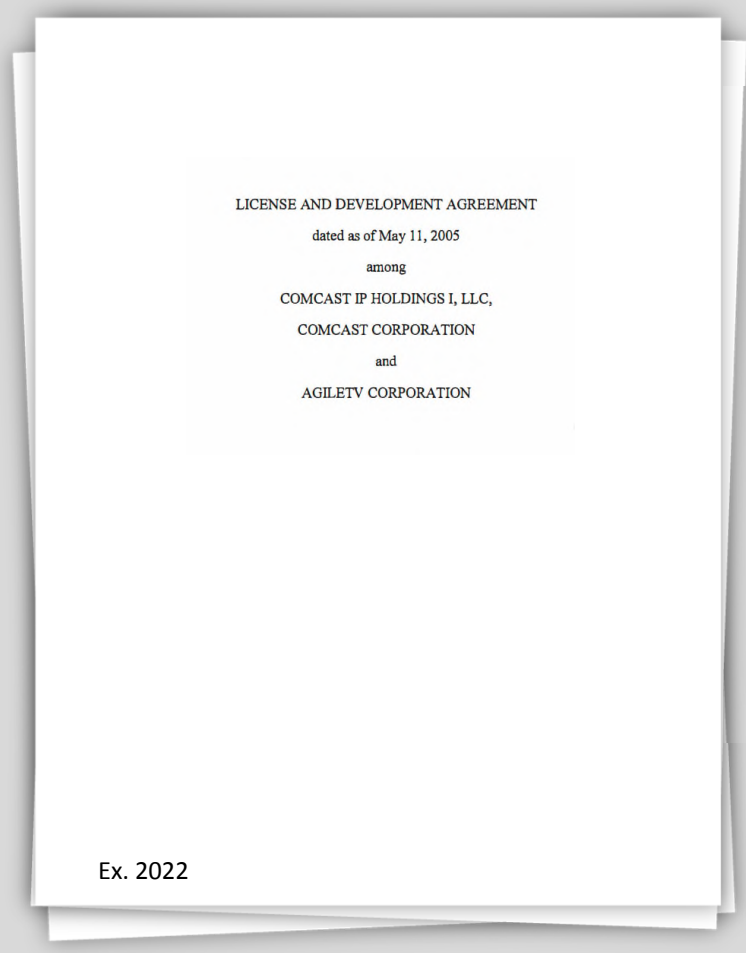
(i) Subject to the terms and conditions of this Agreement, Comcast shall have the right (the "**AgileTV Patent License Option**"), exercisable in its sole discretion at any time during the Option Term, to purchase from AgileTV, and upon such exercise (including payment of the corresponding fee) AgileTV, on behalf of itself and all of its Affiliates, hereby grants to

Comcast, a perpetual, irrevocable, worldwide (subject to the Territory restriction described in clause (A) below), non-exclusive, non-transferable (except as expressly provided in Section 17 of this Agreement), non-sublicensable (except as expressly provided in Section 1(a)(i)(B) and Section 17 of this Agreement) license in, to and under the AgileTV Patents ...

Ex. 2022 at 3-4 of 78

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Comcast Evaluated the AgileTV Product



LICENSE AND DEVELOPMENT AGREEMENT

dated as of May 11, 2005

among

COMCAST IP HOLDINGS I, LLC,

COMCAST CORPORATION

and

AGILETV CORPORATION

Ex. 2022

(c) Initial License Rights. In addition to Comcast's license rights upon exercise of the AgileTV Patent License Option and the One-Time IP License Option (and payment of the applicable consideration therefor), as of the Effective Date, and without the payment of any additional consideration by Comcast, Comcast shall be entitled to, and AgileTV, on behalf of itself and all of its Affiliates, hereby grants to Comcast, all license rights described in Sections 1(a) and 1(b) above (including sublicense rights, but excluding rights in the source code for any software or hardware designs and manufacturing specifications for any hardware, the Intellectual Property Rights to which are included in the AgileTV IP) for the following limited purposes: (i) Comcast's internal use (including any testing of Comcast Products), (ii) any trials of Comcast Products to employee or other non-paying Comcast Subscribers, and (iii) trials (not to exceed one year in duration) of Comcast Products to paying Comcast Subscribers in up to two different Comcast Systems.

Ex. 2022 at 8 of 78

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Comcast Evaluated the AgileTV Product

LICENSE AND DEVELOPMENT AGREEMENT

dated as of May 11, 2005

among

COMCAST IP HOLDINGS I, LLC,

COMCAST CORPORATION

and

AGILETV CORPORATION

Ex. 2022

EXHIBIT E

AGILETV PATENTS AND PATENT APPLICATIONS

The table on the following page lists all AgileTV patents, comprising both pending and issued Utility Patents.

As of the Effective Date of this Agreement, the only third-party patents licensed by AgileTV are four SRI patents related to speech recognition. AgileTV has a fully paid-up, royalty-free, irrevocable, worldwide, perpetual, nonexclusive license, within the field of use of spoken language interfaces to a television set, to the following SRI patents:

6,742,021 "Navigating Network-Based Electronic Information Using Spoken Natural Language Input with Multimodal Feedback"

6,513,063 "Accessing Network-Based Electronic Information Through Scripted Online Interfaces Using Spoken Natural Language Input"

6,523,061 "System, Method, and Article of Manufacture for Agent-Based Navigation in a Speech-Based Data Navigation System"

6,757,718 "Mobile Navigation of Network-Based Electronic Information Using Spoken Input"

Ex. 2022 at 77 of 78

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Comcast Evaluated the AgileTV Product

LICENSE AND DEVELOPMENT AGREEMENT

dated as of May 11, 2005

among

COMCAST IP HOLDINGS I, LLC,

COMCAST CORPORATION

and

AGILETV CORPORATION

Ex. 2022

	AgileTV Docket #	priority date		serial #	filing date	status	pub date	pub number	Title	Office Action History
1	AGLE0001	8-Jun-00	US	09/785,375	16-Feb-01	pending	27-Dec-01	2001-0056350 A1	*System & Method of Voice Recognition Near a Wireline Node of a Network Supporting Cable Television and/or Video Delivery*	OA1(22-Mar-05); allowed with minor formal revisions; in progress.
			PCT	US01/14760	7-May-01	national	n/a	n/a		
2	AGLE0002	18-Sep-03	US	10/943,718	17-Sep-04	pending	10-Feb-05	2005-0033581 A1	*Dual Compression Voice Recordation Non-Repudiation System*	Awaiting first action
			PCT	US04/31075	17-Sep-04	PCT	n/a	n/a		
3	AGLE0004	16-Mar-01	US	09/811,232	16-Mar-01	pending	19-Sep-02	2002-0133828 A1	*Method, Apparatus & System for Video Delivery Using Head-End Pass Through*	OA1 (4 -Mar-05) Claims rejection;under review
			PCT	US02/07049	7-Mar-02	lapsed	n/a	n/a		
4	AGLE0006	18-Dec-00	US	09/740,631	18-Dec-00	pending	20-Jun-02	2002-0078463 A1	*Method & Processor Engine Architecture for the Delivery of Dynamically Compressed Audio & Video Content Over a Broadband Network*	OA1 (29-Mar-05) Partial claims rejection; under review
			PCT	US01/48950	12-Dec-01	lapsed	n/a	n/a		
5	AGLE0007	18-Dec-00	US	09/740,684	18-Dec-00	allowed	20-Jun-02	2002-0078462 A1	*Method & Processor Engine Architecture for the Delivery of Audio & Video Content Over a Broadband Network*	OA1(20-Oct-04): Partial claims rejection; elect claims (20-Dec-04) OA2(13-Jan-2005): Allowed for issue
			PCT	US01/48950	12-Dec-01	none	n/a	n/a		
6	AGLE0008	14-Sep-00	US	09/661,486	14-Sep-00	pending	-	-	*N-Way Demultiplexer*	OA1(18-Oct-04): Partial claims rejection; elect claims (18-Jan-05) (could also file a divisional)
			PCT	US01/27253	31-Aug-01	lapsed	n/a	n/a		
7	AGLE0015	7-Nov-00	US	6,480,703	7-Nov-00	Issued	n/a	n/a	*Common Carrier Multiple Output RF Upconverter*	Issued (12-Nov-02)
			PCT	US01/46821	7-Nov-01	lapsed	n/a	n/a		
8	AGLE0031	7-May-02	US	10/140,583	7-May-02	pending	13-Nov-03	2003-0212845 A1	*Method for High-Speed Data Transfer Across LDT and PCI Buses*	OA1(10-Dec-04): Restriction req; elect claims (10-Jan-05) OA2 (15-Apr-05) Claims rejection; under review
			PCT	n/a	n/a	none	n/a	n/a		
9	AGLE0032	8-Jan-02	US	10/338,441	7-Jan-03	pending	10-Jul-03	2003-0131225 A1	*Fast Booting of a Plex Array*	Awaiting first action
			PCT	n/a	n/a	none	n/a	n/a		
10	AGLE0041	8-Jan-02	US	10/338,591	7-Jan-03	pending	4-Sep-03	2003-0167171 A1	*Method & Apparatus for Voice Control of a Television Control Device*	Awaiting first action
			PCT	n/a	n/a	none	n/a	n/a		
11	AGLE0043	14-Sep-01	US	09/953,543	14-Sep-01	pending	20-Mar-03	2003-0055228 A1	*Method & Apparatus for Increasing Latency in a Data Transmission Scheme Which Employs the Aloha Protocol to Thereby Improve Bandwidth Efficiency*	Awaiting first action
			PCT	n/a	n/a	none	n/a	n/a		
12	AGLE0049	24-Oct-01	US	09/999,515	24-Oct-01	pending	24-Apr-03	2003-0078781 A1	*System & Method for Speech Activated Navigation*	OA1(25-Aug-04): restriction req; elect claims, file divisionals (24-Sep-04) OA2(5-Oct-04): rejected claims; defend (16-Feb-05)
			PCT	n/a	n/a	none	n/a	n/a		
13	AGLE0049	24-Oct-01	US	10/971,564	22-Oct-04	pending	-	-	*System & Method for Speech Activated Navigation*	(Divisional of above)
			PCT	n/a	n/a	none	n/a	n/a		
14	AGLE0049	24-Oct-01	US	10/971,171	22-Oct-04	pending	-	-	*System & Method for Speech Activated Navigation*	(Divisional of above)
			PCT	n/a	n/a	none	n/a	n/a		
15	AGLE0050	3-Oct-01	US	10/260,906	30-Sep-02	pending	24-Apr-03	2003-0078784 A1	*Global Speech User Interface*	Awaiting first action
			PCT	US02/31300	1-Oct-02	national	n/a	n/a		
16	AGLE0061	31-Oct-02	US	10/699,543	30-Oct-03	pending	30-Sep-04	2004-0193426 A1	*Speech Controlled Access to Content on a Presentation Medium*	Awaiting first action
			PCT	n/a	n/a	none	n/a	n/a		
17	AGLE0062	26-Jun-03	US	10/877,520	25-Jun-04	pending	5-Jan-05	2005-0004795 A1	*Zero-Search, Zero-Memory Vector Quantization*	Awaiting first action
			PCT	US04/20303	25-Jun-04	PCT	n/a	n/a		
18	AGLE0063	18-Sep-03	US	10/944,503	16-Sep-04	pending	24-Mar-05	2005-0063493 A1	*Method and Apparatus for Efficient Preamble Detection in Digital Data Receivers*	Awaiting first action
			PCT	US04/30679	16-Sep-04	PCT	n/a	n/a		

Ex. 2022 at 78 of 78

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Comcast Evaluated the AgileTV Product

LICENSE AND DEVELOPMENT AGREEMENT

dated as of May 11, 2005

among

COMCAST IP HOLDINGS I, LLC,

COMCAST CORPORATION

and

AGILETV CORPORATION

Ex. 2022

EXHIBIT E

AGILETV PATENTS AND PATENT APPLICATIONS

The table on the following page lists all AgileTV patents, comprising both pending and issued Utility Patents.

As of the Effective Date of this Agreement, the only third-party patents licensed by AgileTV are four SRI patents related to speech recognition. AgileTV has a fully paid-up, royalty-free, irrevocable, worldwide, perpetual, nonexclusive license, within the field of use of spoken language interfaces to a television set, to the following SRI patents:

6,742,021 "Navigating Network-Based Electronic Information Using Spoken Natural Language Input with Multimodal Feedback"

6,513,063 "Accessing Network-Based Electronic Information Through Scripted Online Interfaces Using Spoken Natural Language Input"

6,523,061 "System, Method, and Article of Manufacture for Agent-Based Navigation in a Speech-Based Data Navigation System"

6,757,718 "Mobile Navigation of Network-Based Electronic Information Using Spoken Input"

Ex. 2022 at 77 of 78

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Comcast Rejected the AgileTV Product

Patent Owner's Witness Mr. Cook

Q. Did you understand that there was a statement of work that was included -- that was referenced in this License and Development Agreement, a statement of work?

A. I think I did recognize that.

Q. Okay. And was the -- was the statement of work designed for Comcast to hire Promptu, or AgileTV, to deploy its technology into the cable -- into a cable -- Comcast cable network system?

A. Yes.

Q. All right. And did Comcast ever sign the statement of work referred to in the License and Development Agreement?

A. I don't believe they did.

Ex. 1027 at 106:20-107:9

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Comcast Rejected the AgileTV Product

Patent Owner's Witness Mr. Cook

Q. Did there ever come a time while you were at Agile where you realized and understood that Comcast would not sign the SOW that AgileTV proposed?

A. There's some other things that haven't come up yet that perhaps need to be put on the table. Because at the annual television show in 2006, Steve Burke and I had a chat in Las Vegas at the show, in front of the Comcast booth. …

***

And Burke said to me, "Cook, we're not going to be able to go through with this. My triple play program takes precedence over what we're doing," or "what you're doing," I mean. "And for that reason, we're going to have to dump what we do with you." …

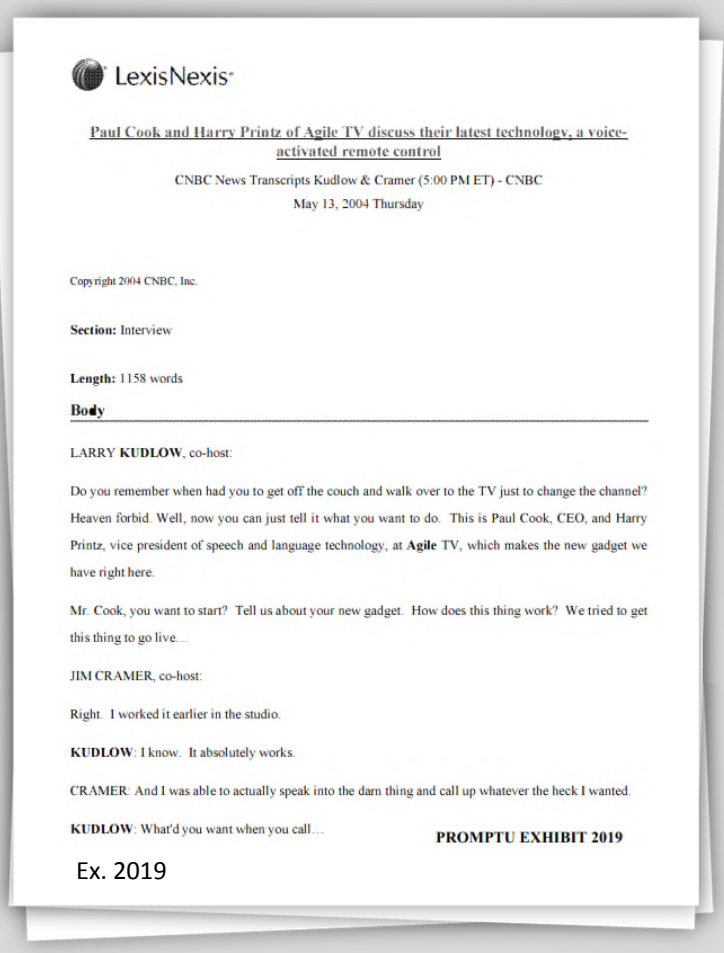
***

And I called the biggest investor in the company and advised him as to what I had learned and -- and took it on from there. But it was the first time that Comcast had said, from anybody, that we weren't going to do business with you.

Ex. 1027 at 215:13-217:1

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Patent Owner Identifies "Praise" for Prior Art Functionality



LexisNexis

Paul Cook and Harry Printz of Agile TV discuss their latest technology, a voice-activated remote control

CNBC News Transcripts Kudlow & Cramer (5:00 PM ET) - CNBC

May 13, 2004 Thursday

Copyright 2004 CNBC, Inc.

Section: Interview

Length: 1158 words

Body

LARRY **KUDLOW**, co-host:

Do you remember when had you to get off the couch and walk over to the TV just to change the channel? Heaven forbid. Well, now you can just tell it what you want to do. This is Paul Cook, CEO, and Harry Printz, vice president of speech and language technology, at **Agile** TV, which makes the new gadget we have right here.

Mr. Cook, you want to start? Tell us about your new gadget. How does this thing work? We tried to get this thing to go live...

JIM CRAMER, co-host:

Right. I worked it earlier in the studio.

KUDLOW: I know. It absolutely works.

CRAMER: And I was able to actually speak into the darn thing and call up whatever the heck I wanted.

KUDLOW: What'd you want when you call...

PROMPTU EXHIBIT 2019

Ex. 2019

KUDLOW: Right. It won't work precisely. Just go through a dry run. How do you do it? Go ahead and do it...

Dr. PRINTZ: Sure.

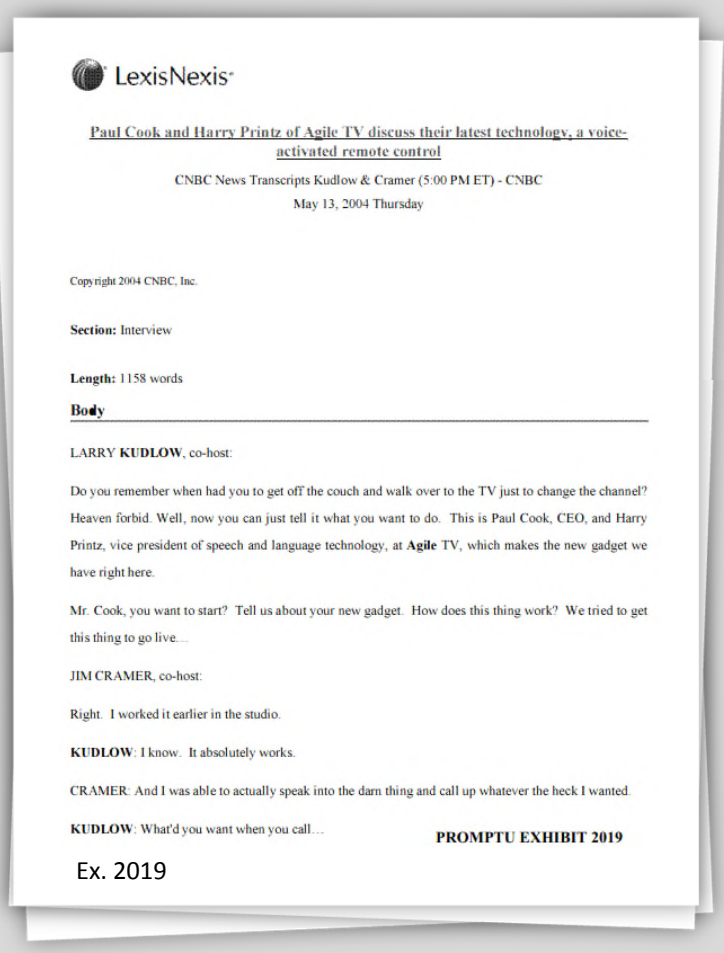
KUDLOW: ...as though...

Dr. PRINTZ: Well, in this case, I would say 'Watch TV.' I believe we have some tape of this. Then we go to a screen that shows live TV playing. Then I could say the name of a channel, ESPN or Discovery Channel. I could move around by channel name, but even more convenient, I could simply say the name of the program that I want to watch, which, of course, would be **KUDLOW** & CRAMER.

Ex. 2019 at 3

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Patent Owner Identifies "Praise" for Prior Art Functionality



LexisNexis

Paul Cook and Harry Printz of Agile TV discuss their latest technology, a voice-activated remote control

CNBC News Transcripts Kudlow & Cramer (5:00 PM ET) - CNBC

May 13, 2004 Thursday

Copyright 2004 CNBC, Inc.

Section: Interview

Length: 1158 words

Body

LARRY **KUDLOW**, co-host:

Do you remember when had you to get off the couch and walk over to the TV just to change the channel? Heaven forbid. Well, now you can just tell it what you want to do. This is Paul Cook, CEO, and Harry Printz, vice president of speech and language technology, at **Agile** TV, which makes the new gadget we have right here.

Mr. Cook, you want to start? Tell us about your new gadget. How does this thing work? We tried to get this thing to go live....

JIM CRAMER, co-host:

Right. I worked it earlier in the studio.

KUDLOW: I know. It absolutely works.

CRAMER: And I was able to actually speak into the darn thing and call up whatever the heck I wanted.

KUDLOW: What'd you want when you call...

PROMPTU EXHIBIT 2019

Ex. 2019

Dr. PRINTZ: Well, in this case, I would say 'Watch TV.' I believe we have some tape of this. Then we go to a screen that shows live TV playing. Then I could say the name of a channel, ESPN or Discovery Channel. I could move around by channel name, but even more convenient, I could simply say the name of the program that I want to watch, which, of course, would be **KUDLOW** & CRAMER.

Ex. 2019 at 3

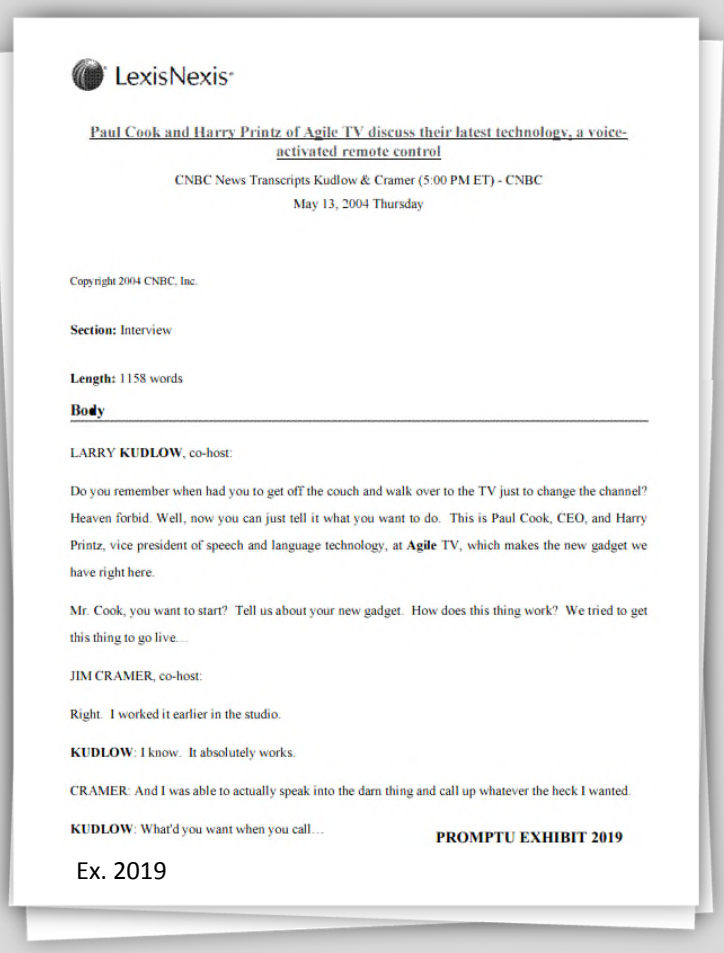
For example, a user may navigate the electronic programming guide of FIG. 11 by saying "GOTO ESPN" to move to the row specified by ESPN.

For example, if the user is tuned to television video, commanding "FIND STAR TREK" will cause a search of the EPG data to be carried out and will tune that program if it is currently available, ...

Houser at 29:20-22, 30:26-29 (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Patent Owner Identifies "Praise" for Prior Art Functionality



LexisNexis

Paul Cook and Harry Printz of Agile TV discuss their latest technology, a voice-activated remote control

CNBC News Transcripts Kudlow & Cramer (5:00 PM ET) - CNBC

May 13, 2004 Thursday

Copyright 2004 CNBC, Inc.

Section: Interview

Length: 1158 words

Body

LARRY **KUDLOW**, co-host:

Do you remember when had you to get off the couch and walk over to the TV just to change the channel? Heaven forbid. Well, now you can just tell it what you want to do. This is Paul Cook, CEO, and Harry Printz, vice president of speech and language technology, at **Agile** TV, which makes the new gadget we have right here.

Mr. Cook, you want to start? Tell us about your new gadget. How does this thing work? We tried to get this thing to go live...

JIM CRAMER, co-host:

Right. I worked it earlier in the studio.

KUDLOW: I know. It absolutely works.

CRAMER: And I was able to actually speak into the darn thing and call up whatever the heck I wanted.

KUDLOW: What'd you want when you call...

PROMPTU EXHIBIT 2019

Ex. 2019

Dr. PRINTZ: Well, in this case, I would say 'Watch TV.' I believe we have some tape of this. Then we go to a screen that shows live TV playing. Then I could say the name of a channel, ESPN or Discovery Channel. I could move around by channel name, but even more convenient, I could simply say the name of the program that I want to watch, which, of course, would be **KUDLOW** & CRAMER.

Ex. 2019 at 3

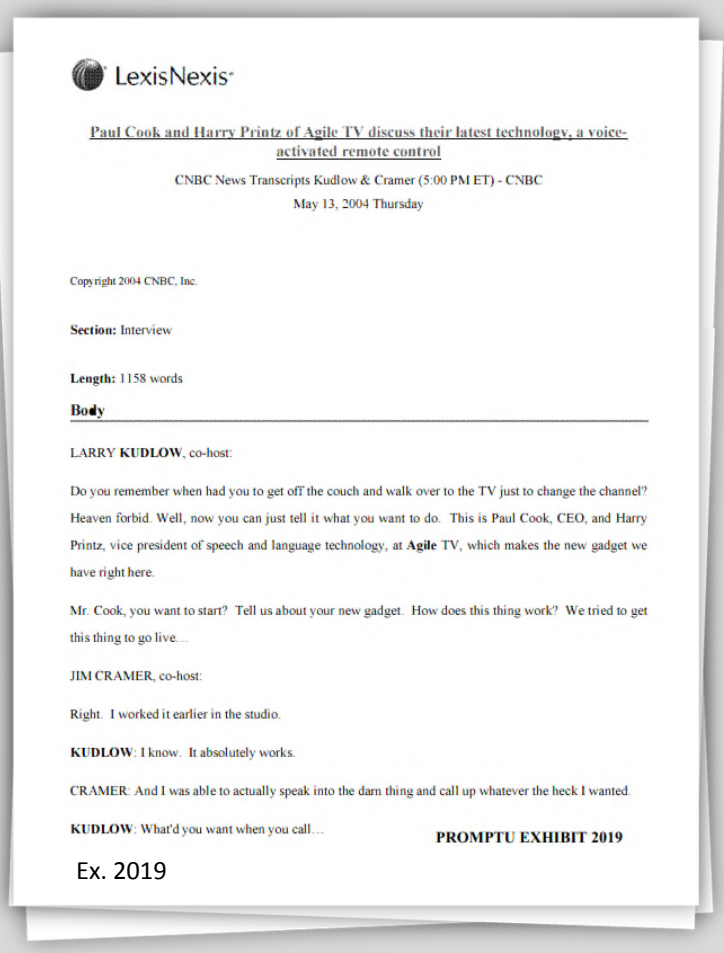
For example, a user may navigate the electronic programming guide of FIG. 11 by saying "GOTO ESPN" to move to the row specified by ESPN.

For example, if the user is tuned to television video, commanding "FIND STAR TREK" will cause a search of the EPG data to be carried out and will tune that program if it is currently available, ...

Houser at 29:20-22, 30:26-29 (Ex. 1012)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Patent Owner Identifies "Praise" for Prior Art Functionality



LexisNexis

Paul Cook and Harry Printz of Agile TV discuss their latest technology, a voice-activated remote control

CNBC News Transcripts Kudlow & Cramer (5:00 PM ET) - CNBC

May 13, 2004 Thursday

Copyright 2004 CNBC, Inc.

Section: Interview

Length: 1158 words

Body

LARRY **KUDLOW**, co-host:

Do you remember when had you to get off the couch and walk over to the TV just to change the channel? Heaven forbid. Well, now you can just tell it what you want to do. This is Paul Cook, CEO, and Harry Printz, vice president of speech and language technology, at **Agile** TV, which makes the new gadget we have right here.

Mr. Cook, you want to start? Tell us about your new gadget. How does this thing work? We tried to get this thing to go live....

JIM CRAMER, co-host:

Right. I worked it earlier in the studio.

KUDLOW: I know. It absolutely works.

CRAMER: And I was able to actually speak into the darn thing and call up whatever the heck I wanted.

KUDLOW: What'd you want when you call...

PROMPTU EXHIBIT 2019

Ex. 2019

CRAMER: All right. So let's say I wanted to--say I am a huge fan of all the movies that Brad Pitt has made. What do I do?

Dr. PRINTZ: You would say 'Find movies with Brad Pitt,' and bam, you'd get a list of movies on screen.

Ex. 2019 at 3

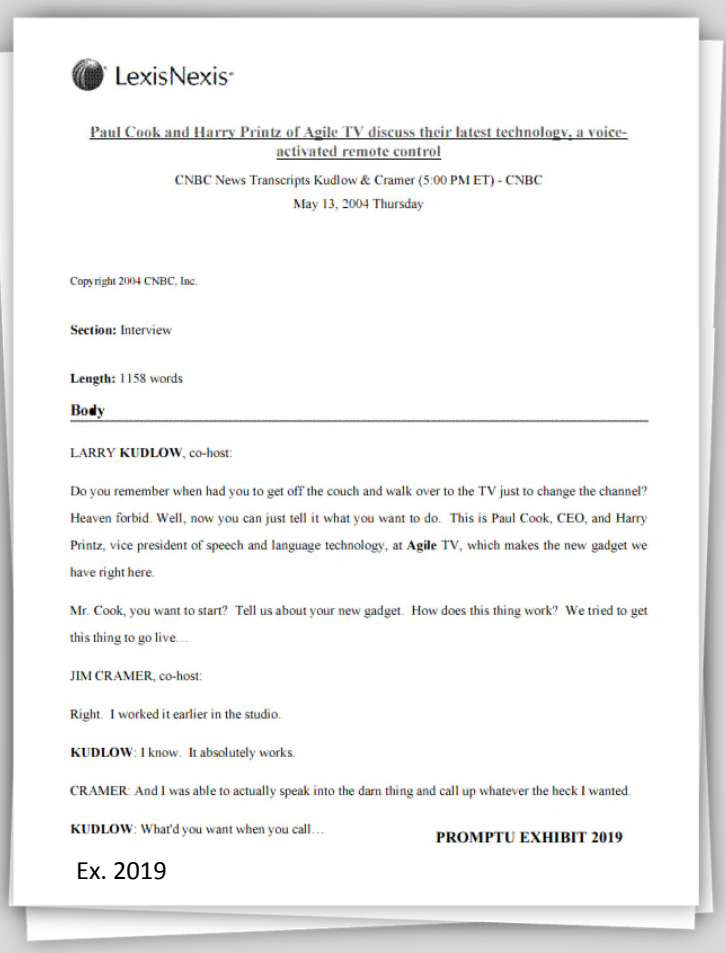
Using a preferred embodiment of the present invention, the user instead speaks aloud, holding remote control microphone **102**, "I want to see that movie starring and directed by Clint Eastwood. Can't remember the title."

If the statement "show me movies starring John Wayne" is spoken into the voice input device, the voice data for this request will be sent by UI agent **650** to facilitator **600**,

Julia at 11:29-32, 14:9-12 (Ex. 1015)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Patent Owner Identifies "Praise" for Prior Art Functionality



LexisNexis

Paul Cook and Harry Printz of Agile TV discuss their latest technology, a voice-activated remote control

CNBC News Transcripts Kudlow & Cramer (5:00 PM ET) - CNBC

May 13, 2004 Thursday

Copyright 2004 CNBC, Inc.

Section: Interview

Length: 1158 words

Body

LARRY **KUDLOW**, co-host:

Do you remember when had you to get off the couch and walk over to the TV just to change the channel? Heaven forbid. Well, now you can just tell it what you want to do. This is Paul Cook, CEO, and Harry Printz, vice president of speech and language technology, at **Agile** TV, which makes the new gadget we have right here.

Mr. Cook, you want to start? Tell us about your new gadget. How does this thing work? We tried to get this thing to go live...

JIM CRAMER, co-host:

Right. I worked it earlier in the studio.

KUDLOW: I know. It absolutely works.

CRAMER: And I was able to actually speak into the darn thing and call up whatever the heck I wanted.

KUDLOW: What'd you want when you call...

PROMPTU EXHIBIT 2019

Ex. 2019

CRAMER: All right. So let's say I wanted to--say I am a huge fan of all the movies that Brad Pitt has made. What do I do?

Dr. PRINTZ: You would say 'Find movies with Brad Pitt,' and bam, you'd get a list of movies on screen.

Ex. 2019 at 3

The user may then enter a command limiting the search, such as "ONLY MARILYN MONROE", assuming "Marilyn Monroe" is a valid keyword.

Houser at 30:49-52 (Ex. 1012)

For example, the user may speak the following input command to the program control device **110**: "Show me all the college football games on this Saturday." The audio selec-

Murdock at 3:53-55 (Ex. 1015)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

“Praise” for Functionality Beyond the Scope of the Claims

Message

From: Stacy Oaksmith [Stacy@jlmpartners.com]
Sent: 6/27/2005 2:02:25 PM
To: Scott Maddux [maddux@agile.tv]
CC: Helen Chung [Helen@jlmpartners.com]
Subject: AgileTV Award Press Release
Attachments: Speech Tech Award 6 27.doc

Hi Scott, I wanted you to see a first draft of the AgileTV Speech Technology award press release before I sent on to Harry and others. Can you look it over and make sure everything looks good from your end. Please let me know if you have any questions or need more background information.

Thanks in advance.

Hope you are well.

Best, Stacy

Stacy Oaksmith
JLM Partners
206-381-3600 office
206-381-3607 fax
***206-819-5284** New Mobile*
www.jlmpartners.com

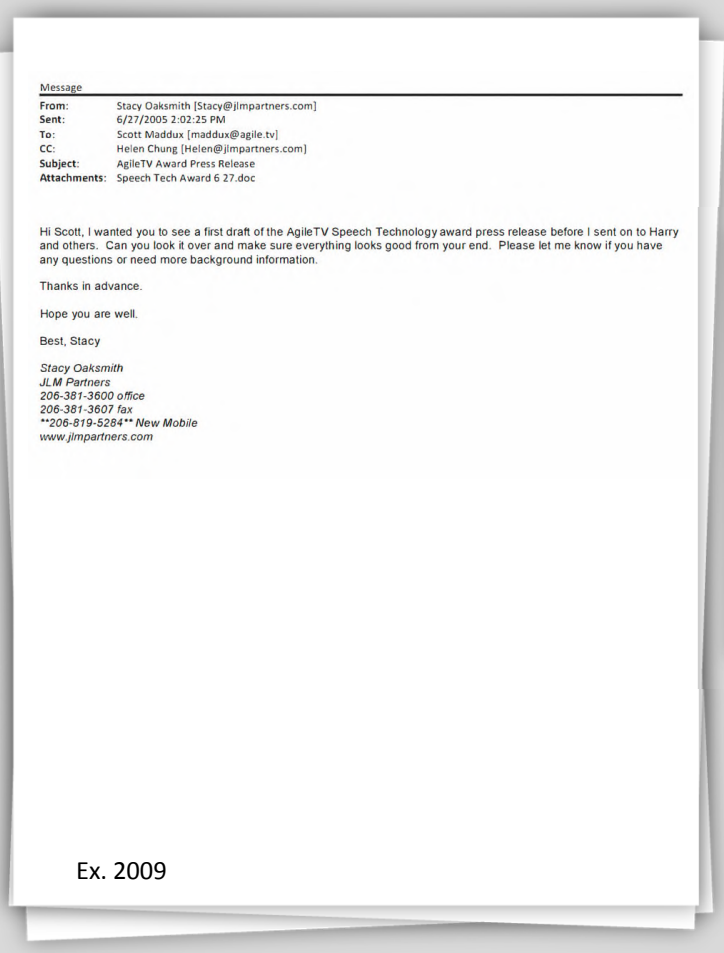
Ex. 2009

Hi Scott, I wanted you to see a first draft of the AgileTV Speech Technology award press release before I sent on to Harry and others. Can you look it over and make sure everything looks good from your end. Please let me know if you have any questions or need more background information.

Ex. 2009 at 1

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

“Praise” for Functionality Beyond the Scope of the Claims



Message

From: Stacy Oaksmith [Stacy@jlmpartners.com]
Sent: 6/27/2005 2:02:25 PM
To: Scott Maddux [maddux@agile.tv]
CC: Helen Chung [Helen@jlmpartners.com]
Subject: AgileTV Award Press Release
Attachments: Speech Tech Award 6 27.doc

Hi Scott, I wanted you to see a first draft of the AgileTV Speech Technology award press release before I sent on to Harry and others. Can you look it over and make sure everything looks good from your end. Please let me know if you have any questions or need more background information.

Thanks in advance.

Hope you are well.

Best, Stacy

Stacy Oaksmith
JLM Partners
206-381-3600 office
206-381-3607 fax
***206-819-5284** New Mobile*
www.jlmpartners.com

Ex. 2009

Promptu utilizes an extensive, dynamically managed database of more than 100,000 phrases and delivers higher than 90 percent voice recognition accuracy. Promptu has been developed and tested with significant input from cable operators and their customers. Consumer trials have resulted in very positive response to the service because it makes finding viewer’s favorite programs fast and easy. Promptu is currently in market trials with several top cable operators.

Ex. 2009 at 2

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Comcast Did Not Copy

Patent Owner's Witness Dr. Chaiken

Counsel for Promptu has informed me that Promptu has asserted a lawsuit in federal district court based, in part, on a complaint that Comcast's current products infringe patents relating to AgileTV's voice recognition technology.

Ex. 2032 ¶ 35

Additionally, Wyers failed to establish copying. Not every competing product that arguably falls within the scope of a patent is evidence of copying; otherwise, "every infringement suit would automatically confirm the nonobviousness of the patent." … Our case law holds that copying requires evidence of efforts to replicate a specific product, which may be demonstrated through internal company documents, direct evidence such as disassembling a patented prototype, photographing its features, and using the photograph as a blueprint to build a replica, or access to the patented product combined with substantial similarity to the patented product.

Wyers v. Master Lock Co., 616 F.3d 1231, 1246 (Fed. Cir. 2010) (citations omitted)

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

Comcast Cable Communications, LLC

Petitioner

v.

Promptu Systems Corporation

Patent Owner

IPR2018-00342, -00343 (Patent No. RE44,326)
IPR2018-00344, -00345 (Patent No. 7,047,196)

Oral Argument

January 28, 2019
Petitioner Comcast's Demonstratives

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE