Apple Inc.,
v.
Uniloc 2017 LLC

IPR2019-00702
U.S. Patent No. 7,969,925

Patent Owner's Demonstrative Exhibits

Before SALLY C. MEDLEY, JEFFREY S. SMITH, and GARTH D. BAER, *Administrative Patent Judges*.
May 21, 2020

Claim 1

1. A method of establishing a direct data transfer session between mobile devices that support a data packet-based communications service over a digital mobile network system, the method comprising:

opening a listening software port on an initiating mobile device to receive communications through the data packet-based communications service;

transmitting an invitation message to a target mobile device through a page-mode messaging service, wherein the invitation message comprises a network address associated with the initiating mobile device, and wherein the target mobile device is located by providing a unique identifier to the page-mode messaging service;

receiving a response from the target mobile device at the listening software port on the initiating mobile device; and

establishing a data transfer session through the data packet-based communications service between the initiating mobile device and the target mobile device, wherein the data transfer session is established in a peer-to-peer fashion without a server intermediating communications through the established data transfer session between the initiating mobile device and the target mobile device.

The Petition is impermissibly keyed to an incorrect construction for the "opening" limitations

Each one of the six grounds in the Petition is impermissibly keyed to an incorrect construction for the **"opening" limitations.** The Board declined to adopt Petitioners' redrafting of the claim language to recite, instead, "associating a port identifier with a process." The relevant briefing raise the following example points (among others):

- ✓ Petitioner's attempt to replace the word "opening" with "associating" fails to give effect to the meaningful and limiting term chosen by the patentee.
- ✓ Petitioner redrafting of "opening" is inconsistent with the remainder of the limitation and the surrounding context.
- ✓ Petitioner's fatal error is further underscored by its interpretation that the claimed "initiating mobile device" need not listen at its newly-opened and special-purpose "listening software port" for a "response from the target mobile device" in particular, notwithstanding the explicit claim language to the contrary.

The Petition is impermissibly keyed to an incorrect construction for the "opening" limitations

- ✓ The preamble of claim 1 affirmatively recites "a data packet-based communications service" that is the object of the act of "opening a listening software port" recited in the body of the claim.
- ✓ The '925 patent offers the following description of a special purpose for which the listening port is configured: "the initiating mobile device opens a TCP port to listen **for communications from the target mobile device** 210." Ex. 1001 4:38–40; see also id. at 4:58–62 (describing an alternative embodiment with reference to Figure 3).
- ✓ During prosecution, when addressing this exact same claim language, the applicant explained that this claim language "requires opening a listening software port on an initiating mobile device every time the initiating mobile device desires to establish communications **with a particular target mobile device**." Ex. 1004 at p. 316.
- ✓ The patentee further unambiguously distinguished the same claim language at issue here from, for example, (1) opening a port that indiscriminately "serves any and all mobile terminals that desire setting up a connection" and (2) "leav[ing] open one known connection to allow any number of devices to communicate with it." Id. pp. 316–317.

Other Dispositive Claim Construction Issues

Petitioner fails to explain why the Board should find there is no claimed relationship between the timing of any of the steps in these independent claims vis-à-vis any step recited in a respective dependent claim:

- ✓ Absent from the Petition is any explanation of how "opening a second listening software port" should be understood in the abstract, without reference to the same initiating mobile device having first opened the listening software port recited in claim 1.
- ✓ For this additional and independent reason, claim 2 has not be shown to be obvious. Analogous reasoning also applies to claims 9 and 16, which depend from claims 8 and 15, respectively.

Deficiencies of “well-known” socket mapping

Petition fails to prove the “opening” limitations encompass permanently-assigned ports which are technically classified as “well-known” because they are generally known by, and hence available to, any foreign computer. A referenced submitted by Petitioner (Ex. 1010) described “well-known sockets” as follows:

> Well-known sockets are a convenient mechanism for a priori associating a socket address with a standard service. For instance, the "Telnet-Server" process is permanently assigned to a particular socket, and other sockets are reserved for File Transfer, Remote Job Entry, Text Generator, Echoer, and Sink processes (the last three being for test purposes). A socket address might be reserved for access to a "Look-Up" service which would return the specific socket at which a newly created service would be provided. The concept of a well-known socket is part of the TCP specification, but the assignment of sockets to services is outside this specification. (See [4].)

Ex. 1010 at 20 (highlighting and underlining added). A port that is *permanently assigned* and made available *a priori* to all devices in general is not one that even available for “opening” as claimed.

Deficiencies of "well-known" socket mapping

Moreover, the patentee explained (in addressing analogous claim language of the parent application) that even in the context of TCP, a "well-known" port is distinguishable. The patentee offered the following explanation in a footnote to an appeal brief before the PTAB:

> Please refer to Annex D for examples of well-known TCP ports for well-known Internet services such as FTP servers (port 20), telnet server (port 23), and HTTP servers (port 80) Such well-known TCP ports are not opened by default on mobile devices because mobile devices do not run servers for data packet based communications services by default. Furthermore, because such well-known ports are "well-known", they available to any computer desiring to communicate the computer having the opened port and are therefore not opened for a specific target mobile device, as required by claim 1.

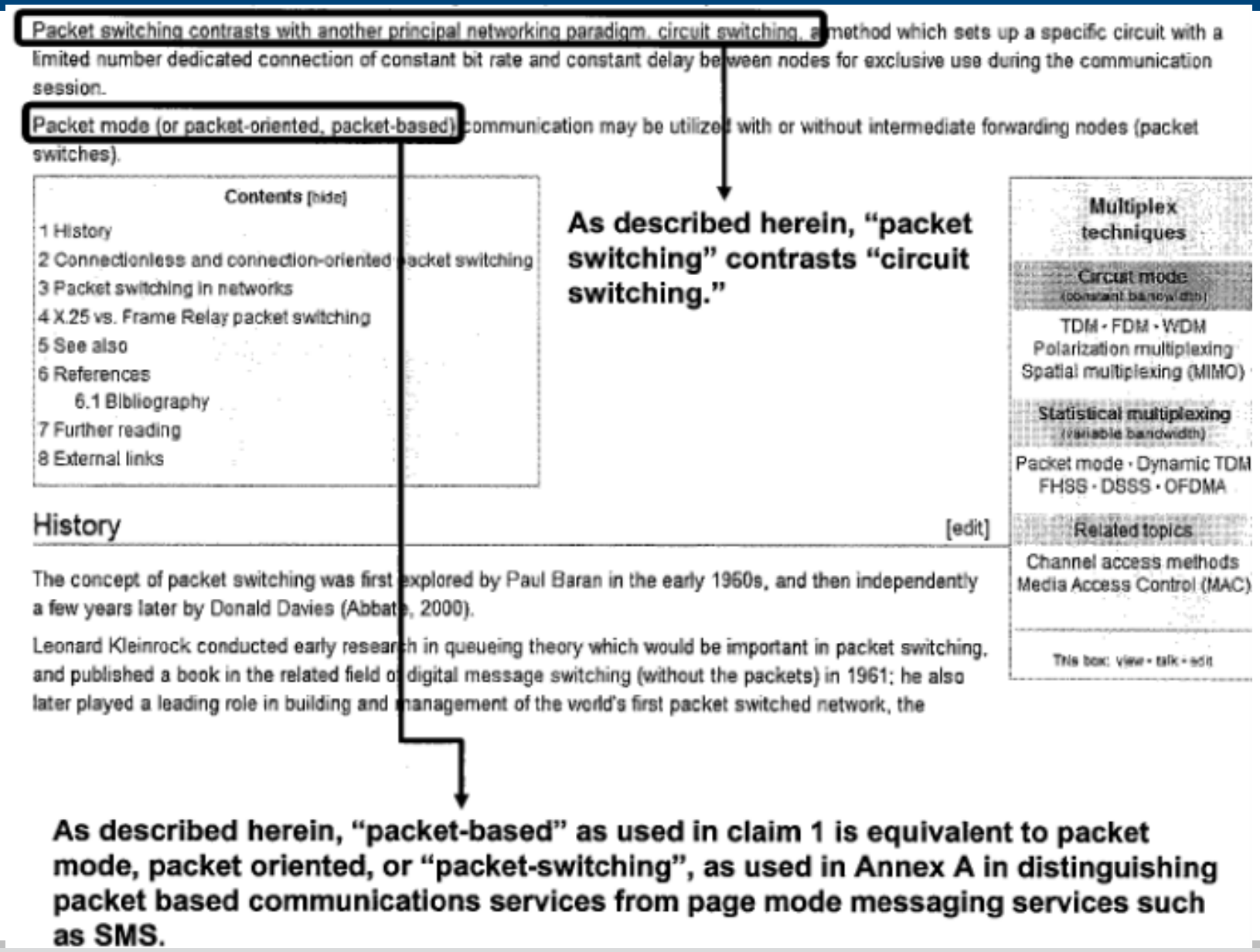
Ex. 1004 p. 416.

Deficiencies of "TCP in RFC793"

Petitioner's reliance on the cited description of TCP in RFC793 essentially rehashes the same argument persuasively addressed in an appeal brief of a parent application. See Ex. 1004 pp. 414–416.

- ✓ The patentee successfully traversed an examiner rejection which "maintain[ed] that opening a listening software port is implicit [in the cited art] and that any mobile device necessarily has to open a listening software port just to operate and communicate with other devices." Ex. 1004 pp. 414–416.
- ✓ Applicant successfully argued conventional TCP ports of the time were opened on servers—not on mobile devices.
- ✓ Another point of distinction over opening conventional ports in general focused on the specific *type* of port opening required by the claim language—i.e., a packet-based port (as opposed, for example to a circuit-switched port).

Deficiencies of “TCP in RFC793”



Packet switching contrasts with another principal networking paradigm, circuit switching, a method which sets up a specific circuit with a limited number dedicated connection of constant bit rate and constant delay between nodes for exclusive use during the communication session.

Packet mode (or packet-oriented, packet-based) communication may be utilized with or without intermediate forwarding nodes (packet switches).

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As described herein, “packet switching” contrasts “circuit switching.”

Multiplex techniques

Circuit mode (constant bandwidth)
TDM · FDM · WDM
Polarization multiplexing
Spatial multiplexing (MIMO)

Statistical multiplexing (variable bandwidth)
Packet mode · Dynamic TDM
FHSS · DSSS · OFDMA

Related topics
Channel access methods
Media Access Control (MAC)

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History [edit]

The concept of packet switching was first explored by Paul Baran in the early 1960s, and then independently a few years later by Donald Davies (Abbate, 2000).

Leonard Kleinrock conducted early research in queueing theory which would be important in packet switching, and published a book in the related field of digital message switching (without the packets) in 1961; he also later played a leading role in building and management of the world's first packet switched network, the

As described herein, “packet-based” as used in claim 1 is equivalent to packet mode, packet oriented, or “packet-switching”, as used in Annex A in distinguishing packet based communications services from page mode messaging services such as SMS.

Deficiencies of combinations involving Alos

Petitioner overlooks the fact that Alos' station 1 receives communications on line 13 of the Switched Telephone Network or "STN"—i.e., not a packet-based communication service.

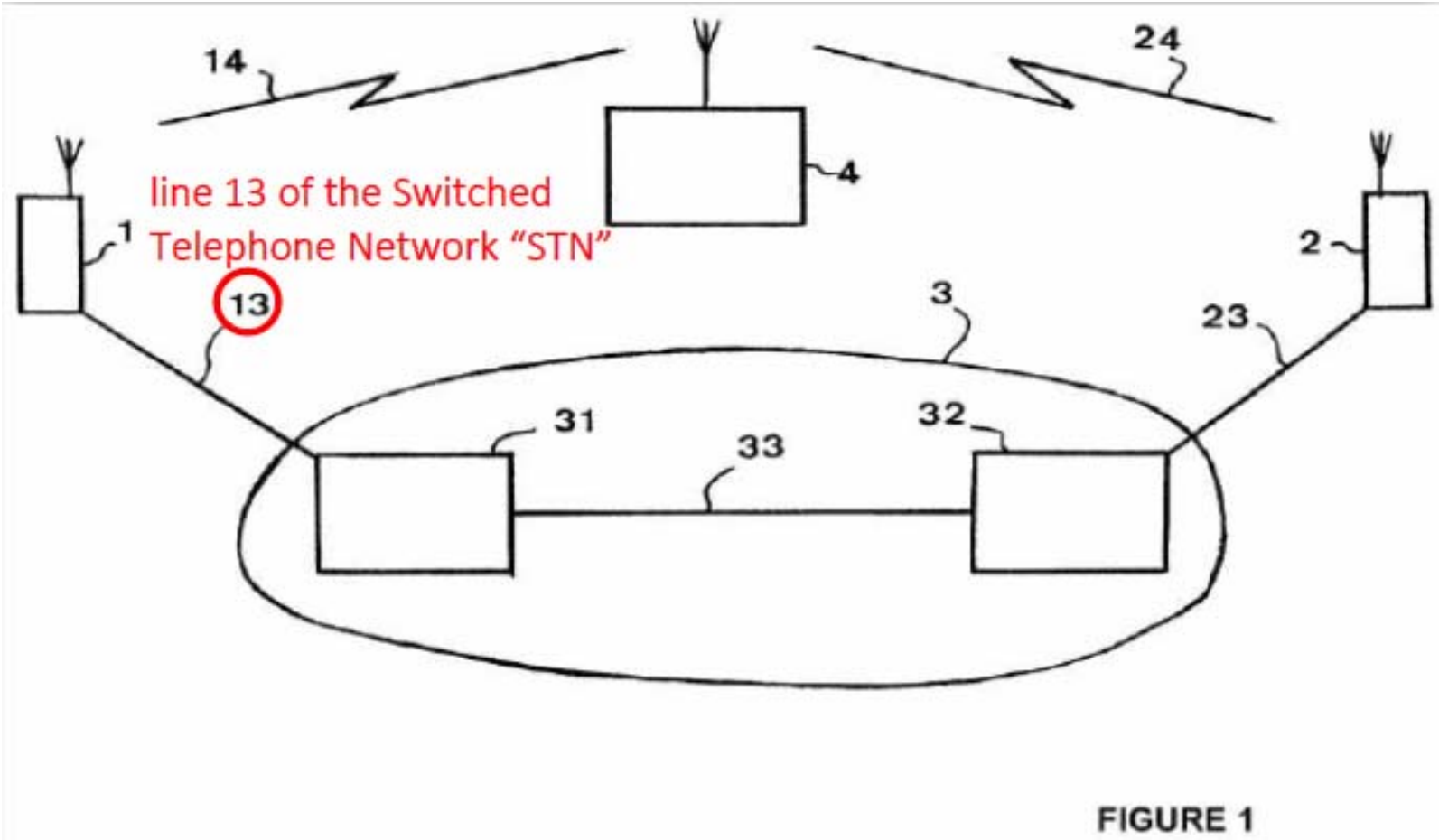

FIGURE 1

Deficiencies arising from assertion of Cordenier

Petitioner relies on a paragraph in Cordenier that states information is sent over distinct channels 8, 10, 11 and 9 (in that order).

Petitioner overlooks the disclosure in Cordenier that only two of those channels (10, 11) are part of a "data network" and that terminals 1 and 2 are not directly connected to those channels at least because distinct channels 8 and 9 are respectively interposed therebetween.

Petitioner fails to explain how Cordnier's disclosure of logging onto a server to establish a required communication channel renders the claim language obvious, especially given the Petition states the '925 patent claims to have invented "a technique for transferring data between mobile devices that does not require a server."