

Declaration of Dean Willis
Petition for *Inter Partes* Review of Patent No. 8,457,113

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Cisco Systems, Inc.
Petitioner

v.

Focal IP LLC,
Patent Owner

Patent No. 8,457,113 B2
Filing Date: Jun 22, 2010
Issue Date: Jun. 4, 2013

BRANCH CALLING AND CALLER ID BASED CALL ROUTING
TELEPHONE FEATURES

**DECLARATION OF DEAN WILLIS IN SUPPORT OF PETITION FOR
INTER PARTES REVIEW OF U.S. PATENT NO. 8,457,113**

Inter Partes Review No. 2016-01254

BHN, et al. v. FOCAL IP, LLC

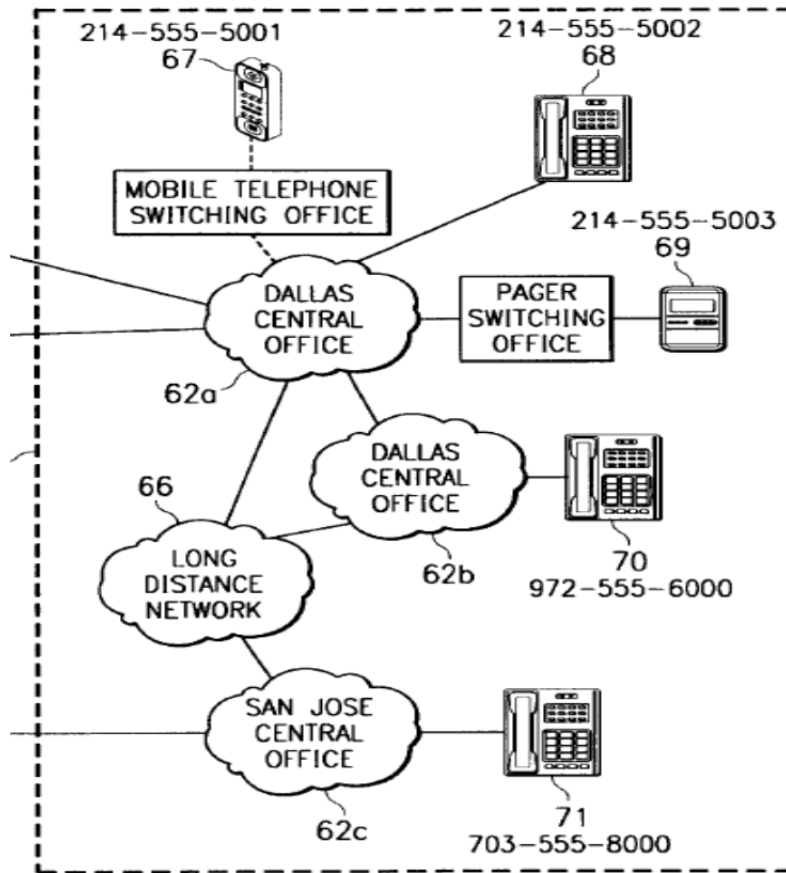
(b) the sophistication of the technology in question, and the rapidity with which innovations occur in the field; (c) the educational level of active workers in the field; and (d) the educational level of the inventor.

21. The relevant technology field for the '113 patent has to do with controllers for connecting calls between a packet network, such as a VoIP network, and a circuit-switched network, such as the Public Switched Telephone Network (PSTN). Based on this, a POSA at the time of the '113 patent filing would have been an engineer with at least a bachelor's degree in electrical engineering, computer science, or a related field, or equivalent experience of at least three years of working in field of telecommunications or networking.

22. Unless otherwise specified, when I mention a POSA or someone of ordinary skill, I am referring to someone with at least the above level of knowledge and understanding.

23. Based on my experiences, I have a good understanding of the capabilities of a person of ordinary skill in the relevant field. Indeed, in addition to being a person of at least ordinary skill in the art, I have worked closely with many such persons over the course of my career.

24. Although my qualifications and experience exceed those of the hypothetical person having ordinary skill in the art defined above, my analysis and opinions regarding the '113 patent have been based on the perspective of a person



39. Telephone services, including voice based telephone calls and fax messaging, is generally carried out over the PSTN, which is the backbone of the telephone system in the United States. Ex. 1011 at 41-43; Ex. 1037 at 49-51. The PSTN consists of a global network of circuit switches arranged in a geographical hierarchy. Ex. 1011 at 41-43; Ex. 1037 at 49-51. In the 1990s most of the connections to the PSTN were made using “last-mile” copper connections that transmitted analog signals. Ex. 1011 at 41-43; Ex. 1037 at 49-50. These connections were routed directly to a central office or edge switch. Ex. 1037, 49-51. In the PSTN, switches known as tandem switches or class 3 switches serve to

interconnect geographical regions and edge switches or class 5 switches connect between tandem switches and end-user devices, like telephones, within a local geographic area. Ex. 1011 at 41-43, 62-63; Ex. 1013 at 18; Ex. 1037 at 49-51.

40. Packet-switched networks rely on a different set of technologies to transmit data. In a packet-switched network, data, including a voice call, is digitized and transmitted in small chunks called packets. Ex. 1012 at 146-149. Each packet includes information called a header address telling the packet where its final destination is. Ex. 1013 at 15; Ex. 1012 at 146-149. Unlike a circuit-switched network, the packets that make up a voice signal can follow different paths, directed by devices called routers, to the same destination and that path is not dedicated to the particular transmission. At the receiving end, the packets are reassembled to transmit the signal. Ex. 1011 at 58-63. Advantageously, packet-switched networks do not rely on direct connections. Ex. 1013 at 18; Ex. 1012 at 146-149. Nor are packet-switched networks affected by failure of a particular line, because the packets can be rerouted. The Internet is an example of a packet-switched network and it operates in accordance with the Internet Protocol (IP) and the Transmission Control Protocol (TCP). Ex. 1028 at 16-21. The combination of the IP and TCP protocols is known as the TCP/IP protocol stack. Ex. 1028 at 16-21. A diagram comparing packet- and circuit switched networks is reproduced below. Ex. 1011 at 59, Fig. 2-34.

1001 at col. 1:59-2:16, 2:17-23, 2:40-54. These services were also the type of web-based toll systems that rely upon the toll network through the use of “800” numbers. Ex. 1001 at col. 1:41-44, 2:23-29, 3:41-49.

69. The '113 patent's alleged invention was to provide web-based call selection features through a controller connected to a tandem switch rather than an edge switch, to provide the telephony features. Ex. 1001 at col. 2:1-3, 3:35-40.

70. As shown in figure 2, the tandem access controller (TAC 10) controlled call features the PSTN Tandem Switches:

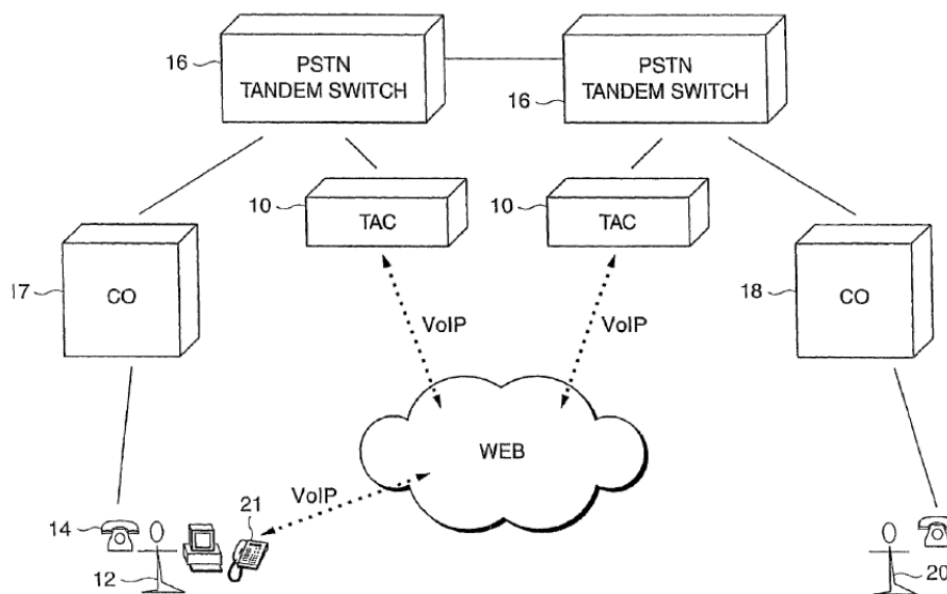


FIG. 2

71. The '113 patent discloses that its controller and system uses known technologies and conventional computer and telephony equipment. Ex. 1001 at col. Background, 1:30-2:54, 2:57-3:62, 4:35-54, 5:32-36, 6:48-67.

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