

I. Comparison of Petition at pp. 18-20 (Ground 1)
With the Petition at pp. 39-41 (Ground 2)

Petition at pp. 18-20 (Chu '684 + Chu '366 argument)	Petition at pp. 39-41 (Chu '684 + Chen argument)
<p>There is significant overlap between Chu '684 and Chu '366. Both references teach telecommunications systems in which VoIP subscribers can place calls to a customer on the public PSTN. <i>Compare Ex. 1006, Chu '684</i> at 8:65-9:1 (“At step 608, after receiving all the dialed digits from the phone 101, server 110 consults its dial plan to determine whether the call is local, to another on-net phone, or to a phone that is on the PSTN.”) <i>with Ex. 1007, Chu '366</i> at 14:30-33 (“[T]here is shown a system for communications between a computing environment 202 including the application program according to the present system and a PSTN telephone 216.”).</p> <p>Both references also teach a process in which dialed digits and caller attributes are used to determine where the call should be routed. <i>Compare Ex. 1006, Chu '684</i> at 8:65-9:1 (“At step 608, after receiving all the dialed digits from the phone 101, server 110 consults its dial plan to determine whether the call is local, to another on-net phone, or to a phone that is on the PSTN.”) <i>with Ex. 1007, Chu '366</i> at Fig. 6. Finally, both references expressly reference E.164 as</p>	<p>There is significant overlap between Chu '684 and Chu '366Chen. Both references teach telecommunications systems in which VoIP subscribers can place calls to a customer on the public PSTN. <i>Compare Ex. 10061003, Chu '684</i> at 8:65-9:1 (“At step 608, after receiving all the dialed digits from the phone 101, server 110 consults its dial plan to determine whether the call is local, to another on-net phone, or to a phone that is on the PSTN.”) <i>with Ex. 1007, Chu '366 at 14:30-33 (“[T]here is shown</i><u>1004, Chen at Fig. 5 (Illustrating a system for communications between a computing environment 202 including the application program according to the present system</u>VoIP customer “SIP Phone,” external number Translator, “PSTN Gateway, and a-PSTN telephone 216.”Switch).</p> <p>Both references also teach a process in which dialed digits and caller attributes are used to determine where the call should be routed. <i>Compare Ex. 10061003, Chu '684</i> at 8:65-9:1 (“At step 608, after receiving all the dialed digits from the phone 101, server 110 consults its dial plan to determine whether the call is local, to another on-net phone, or to a phone that is on the PSTN.”) <i>with Ex. 1007, Chu '3661004, Chen</i> at Fig. 6. Finally, both references expressly reference E.164 as an</p>

an international standard dial plan. Compare Ex. 1006, *Chu* '684 at 3:59-61 (“[E]ach IP phone [may be] assigned its own E.164 number (the international standard dial plan) and receiving calls from the PSTN directly.”) with Ex. 1007, *Chu* '366 at 1:18-20 (“E.164 [] provides a uniform means for identifying any telephone number in the world to any telephony user in the world.”).

It would have been obvious to one of skill in the art to modify the system described by *Chu* '684 with the specific dialed digit reformatting teachings of *Chu* '366. Given that the system of *Chu* '684 already contains all the infrastructure needed to support such reformatting, the modification to *Chu* '684 would be straightforward, not requiring undue experimentation, and would produce predictable results. Upon reading the disclosure of *Chu* '684, a person of ordinary skill in the art would have recognized that allowing users to place calls as if they were dialing from a standard PSTN phone would be desirable, creating a system capable of supporting a more intuitive and user-friendly interface. See Ex. 1009, *Houh Decl.* at ¶¶ 35-39.

international standard dial plan. Compare Ex. ~~1006~~1003, *Chu* '684 at 3:59-61 (“[E]ach IP phone [may be] assigned its own E.164 number (the international standard dial plan) and receiving calls from the PSTN directly.”) with Ex. ~~1007~~,—~~*Chu* '366~~1004, *Chen* at ~~1:18-20~~¶ 006 (“E.164 [] ~~provides a uniform means for identifying any telephone number in the world to any telephony user in the world.~~”).—is an ITU-T (International Telecommunication Union Telecommunication Standardization Sector) recommendation that defines the international public telecommunication numbering plan.”).

It would have been obvious to one of skill in the art to modify the system described by *Chu* '684 with the specific dialed digit reformatting teachings of ~~*Chu* '366~~*Chen*. Given that the system of *Chu* '684 already contains all the infrastructure needed to support such reformatting, the modification to *Chu* '684 would be straightforward, not requiring undue experimentation, and would produce predictable results. Upon reading the disclosure of *Chu* '684, a person of ordinary skill in the art would have recognized that allowing users to place calls as if they were dialing from a standard PSTN phone would be desirable, creating a system capable of supporting a more intuitive and user-friendly interface. See Ex. ~~1009~~1006, *Houh Decl.* at ¶¶ ~~35-39~~40-44.

One of ordinary skill would thus have appreciated that these improvements to *Chu '684* could be achieved by merely programming the system of *Chu '684* to analyze the dialed digits and reformat as necessary using caller attributes such as national and area code. Such modifications are simply a combination of the system of *Chu '684* with elements of *Chu '366* that would have yielded predictable results without requiring undue experimentation. *Id.* at ¶ 38. Thus, it would have been natural and an application of nothing more than ordinary skill and common sense to combine *Chu '684* with the number reformatting of *Chu '366*. *Id.* Therefore, claims 1, 7, 27-28, 34, 54, 72-74, 92-93, and 111 of the '815 Patent are unpatentable under §103(a) as obvious over *Chu '684* in view of *Chu '366*, as shown in the charts below.

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II. Comparison of Petition at pp. 20-36 (Ground 1)
With the Petition at pp. 41-58 (Ground 2)

Right-hand column compares:

*the claim chart for Chu '684 + Chu '366 (Ground 1) with
the claim chart for Chu '684 + Chen (Ground 2).*

Red strikethrough represents text in Ground 1, but not in Ground 2.

Blue underline represents text in Ground 2, but not in Ground 1.

[underlining in original omitted]

US Patent 8,542,815	Obvious over Chu '684 (Ex. 1003) in view of Chu '366 <u>Chen</u> (Ex. 1004 <u>1005</u>)
<p>1. A process for operating a call routing controller to facilitate communication between callers and callees in a system comprising a plurality of nodes with which callers and callees are associated, the process comprising:</p>	<p><i>Chu '684 teaches a process for operating a soft-switch (“call routing controller”) to facilitate telephone calls (“communication”) between callers and callees, each of which is associated with one of a plurality of network nodes.</i></p> <p>Chu '684 describes “a novel method for establishing and managing voice call traffic in an VoIP IP virtual private network. The method comprises, in one embodiment, determining the relative location of a terminating point with respect to an originating point of a new communication containing the voice data, determining one or more IP addresses to egress the communication from the originating point to the terminating point.” Ex. 1003, <i>Chu '684</i> at 2:34-44.</p> <p>“An apparatus for IP-based VPN communications includes at least one soft-switch and at least one packet switch having an interface to said at least one soft-switch. The packet switch has a VPN processing module for selectively establishing a VPN based on a selection of originating and terminating IP addresses of voice calls passed to the at least one soft-switch and at least one packet switch. . . . The apparatus may further include a PSTN gateway connected to a gateway soft-switch and said at least one soft-switch</p>

	<p>for processing “off-net” calls.” <i>Id.</i> at 2:51- 64; <i>see also id.</i> at 1:9-13.</p>
<p>(a) in response to initiation of a call by a calling subscriber, receiving a caller identifier and a callee identifier;</p>	<p><i>Chu ’684 teaches servers and soft-switches that receive subscriber identification (e.g., IP address and ID of IP phone connection to server) and dialed digits of the called party (“caller identifier and callee identifier”) when a caller initiates a call.</i></p> <p>“The soft-switch is the intelligence of the system. It contains all the information regarding the subscribers' VPNs. For example, it keeps track of the VPN that a location belongs to, the dial plans of the subscribers, the VPN identifier for an VPN (or a particular interface) and the like.” <i>Id.</i> at 4:59-63.</p> <p>“At step 608, after receiving all the dialed digits from the phone 101, server 110 consults its dial plan to determine whether the call is local, to another on-net phone, or to a phone that is on the PSTN. . . . The server 110 then sends an SIP “invite” message to soft-switch 220 at the central office 205. . . . The outgoing call request message from server 110 to soft-switch 220 includes the following information . . . : (1) the called number; (2) whether the number plan is the private numbering plan or the public E.164 number plan; (3) the ID of the connection to used []; (4) the IP address of IP phone 101 and UDP port number for the backward and forward channels; and (5) other parameters required for enhanced services and features.” <i>Id.</i> at 8:65-9:26 (emphasis added).</p>
<p>(b) locating a caller dialing profile comprising a username associated with the caller and a plurality of calling attributes associated with the caller;</p>	<p><i>Chu ’684 teaches locating a subscriber’s dial plan that includes a unique subscriber identifier (e.g., E.164 telephone number) (“username”) and calling attributes of the subscriber.</i></p> <p>“The soft-switch is the intelligence of the system. It contains all the information regarding the subscribers' VPNs. For example, it keeps track of the VPN that a location belongs to, the dial plans of the</p>

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