

Google LLC
v.
Wildseed Mobile LLC

IPR2023-00248

U.S. Patent No. 7,376,414

Patent Owner's Demonstratives

March 7, 2024

Instituted Grounds

IPR2023-0048 ('414 Patent)		
Claims Challenged	Basis	Applied References
1-7, 9-14	35 U.S.C. § 103	Frerichs, Kawasaki, Kauffman

DI, 7

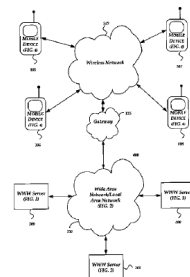
Agenda

- ▶ **The '414 Patent**
- ▶ The Applied Art does not Render Obvious the “Information Taken” Limitations
- ▶ The Applied Art does not Render Obvious the “Recording” (Caching) Limitations
- ▶ No Motivation to Combine
- ▶ The Applied Art does not Render Obvious the Dependent Claims

The '414 Patent

(12) United States Patent Engstrom		(10) Patent No.: US 7,376,414 B2
		(45) Date of Patent: May 20, 2008
(54) METHOD AND SYSTEM FOR INSERTING ADVERTISEMENTS INTO BROADCAST CONTENT	6,587,835 B1 * 7/2003 Treyz et al. 705/14 6,600,908 B1 * 7/2003 Chan 455/150.1 6,647,257 B2 * 11/2003 Owensby 455/414.1 6,698,020 B1 * 2/2004 Zigmund et al. 725/34 6,813,501 B2 * 11/2004 Kinnunen et al. 455/456.2 6,823,225 B1 * 11/2004 Sass 700/94 6,950,623 B2 * 9/2005 Brown et al. 455/3.01 6,952,559 B2 * 10/2005 Bates et al. 455/3.06 7,003,478 B1 * 2/2006 Choi 705/14 7,006,807 B2 * 2/2006 Szczubiewski et al. 455/227 2001/0037240 A1 * 11/2001 Marks et al. 705/14	
(75) Inventor: G. Eric Engstrom , Kirkland, WA (US)		
(73) Assignee: Varia Mobil LLC , Seattle, WA (US)		
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 587 days.		
(21) Appl. No.: 10/143,342		
(22) Filed: May 10, 2002	(Continued)	
(65) Prior Publication Data US 2002/0169540 A1 Nov. 14, 2002	<i>Primary Examiner</i> —Fan Tsang <i>Assistant Examiner</i> —Lisa Hashem (74) <i>Attorney, Agent, or Firm</i> —Schwabe, Williamson & Wyatt, P.C.	
Related U.S. Application Data		
(60) Provisional application No. 60/290,592, filed on May 11, 2001.	(57) ABSTRACT	
(51) Int. Cl. <i>H04L 12/58</i> (2006.01) <i>H04M 3/00</i> (2006.01) <i>H04Q 7/20</i> (2006.01) <i>H04N 7/10</i> (2006.01) <i>G06F 3/00</i> (2006.01)	The present invention is directed to providing advertisements for playing on a mobile device based on previously provided information regarding the mobile device user. Information regarding the user is provided to a server, which is also in communication with advertisers that supply advertisements for playing on the mobile device. The server employs the user information to determine which advertisements might be suitable for the mobile device user. The determined advertisements may be cached/recorded on the mobile device for later playback or they can be provided in real time at a scheduled time for the playing of advertisements. Also, advertisements associated/included with the currently playing content could be suppressed in favor of the determined advertisements. Additionally, the currently playing content can be recorded while advertisements are playing on the mobile device; and then the playing of the content can be subsequently resumed from the point where the advertisements started playing.	
(52) U.S. Cl. 455/414.3; 455/412.1; 455/420; 455/456.3; 725/34; 725/42		
(58) Field of Classification Search 455/456.3, 455/412.1, 420, 414.3; 725/34, 42 See application file for complete search history.		
(56) References Cited U.S. PATENT DOCUMENTS 5,689,799 A * 11/1997 Dougherty et al. 455/2.01 6,163,683 A * 12/2000 Dunn et al. 455/151.1 6,226,444 B1 * 5/2001 Goldschmidt Iki et al. ... 386/83 6,507,764 B1 * 1/2003 Parrella et al. 700/94 6,526,335 B1 * 2/2003 Treyz et al. 701/1 6,587,127 B1 * 7/2003 Leeke et al. 715/765		

14 Claims, 9 Drawing Sheets



The present invention is directed to providing advertisements for playing on a mobile device based on previously provided information regarding the mobile device user. Information regarding the user is provided to a server, which is also in communication with advertisers that supply advertisements for playing on the mobile device. The server employs the user information to determine which advertisements might be suitable for the mobile device user. The determined advertisements may be cached/recorded on the mobile device for later playback or they can be provided in real time at a scheduled time for the playing of advertisements. Also, advertisements associated/included with the currently playing content could be suppressed in favor of the determined advertisements. Additionally, the currently playing content can be recorded while advertisements are playing on the mobile device; and then the playing of the content can be subsequently resumed from the point where the advertisements started playing.

EX1001, Abstract

EX1001, 1

'414 Patent Exemplary Claim

1. A method for playing content and advertisements on a cellular device, comprising:
 - (a) autonomously providing to a server, by the cellular device, information associated with a user of the cellular device, the information taken by the cellular device from a message sent to the cellular device from another user of another cellular device, the message identifying characteristics of the user of the cellular device;
 - (b) receiving from the server, by the cellular device, at least one advertisement to be played on the cellular device, wherein the at least one received advertisement is determined by the server based at least in part on the provided information;
 - (c) if a determined time interval occurs, stopping playing of content, by the cellular device, and playing at least one of the determined advertisements, by the cellular device, the playing of the at least one determined advertisement comprising:
 - recording, by the cellular device, the content which playing was stopped, while the at least one determined advertisement is playing; and
 - when the playing of the at least one determined advertisement is completed, resuming the playing of the stopped content, by the cellular device, from where the stopping of the playing of the content occurred, using the recorded content.

Agenda

- ▶ The '414 Patent
- ▶ **The Applied Art does not Render Obvious the “Information Taken” Limitations**
- ▶ The Applied Art does not Render Obvious the “Recording” (Caching) Limitations
- ▶ No Motivation to Combine
- ▶ The Applied Art does not Render Obvious the Dependent Claims

Kawasaki does not disclose “information taken” from a message

Patent

1. A method for playing content and advertisements on a cellular device, comprising:

- (a) autonomously providing to a server, by the cellular device, information associated with a user of the cellular device, the **information taken** by the cellular device **from a message** sent to the cellular device from another user of another cellular device, the message identifying characteristics of the user of the cellular device;
- (b) receiving from the server, by the cellular device, at least one advertisement to be played on the cellular device, wherein the at least one received **advertisement is determined by the server based at least in part on the provided information;**
- (c) if a determined time interval occurs, stopping playing of content, by the cellular device, and playing at least one of the determined advertisements, by the cellular device, the playing of the at least one determined advertisement comprising:
 - recording, by the cellular device, the content which playing was stopped, while the at least one determined advertisement is playing; and
 - when the playing of the at least one determined advertisement is completed, resuming the playing of the stopped content, by the cellular device, from where the stopping of the playing of the content occurred, using the recorded content.

- Claim 1 requires information “taken” from a message. A server uses that taken information to determine an advertisement.
- The proper construction of “taken” requires information that was actually in a message.
- Kawasaki outputs numbers that indicate whether a message matches a pre-defined category. The number and the pre-defined category are not taken from a message.
- Kawasaki sends servers (for ad selection) user profiles that are generated based on the numeric match ratings. The profiles are even further removed from messages—not taken from messages.

Petitioner's Dr. Houh incorrectly construed "taken" because he misread the specification

Patent Owner's Dr. Malek

63. Dr. Houh's opinion regarding the meaning of information "taken" from a message is based on his misreading of the '414 specification. Specifically, he mistakenly thought that the '414 patent specification did not refer to taking actual data from a message, and therefore concluded that a POSITA would not understand the claim term "taken" to be limited to information that is actually in a message:

Q. ... let me ask you, your understanding of the '414 patent *taking information from a message does not require that you actually extract something, content, data, from a message and send it to the server; correct?*

A. Again, *I don't believe the spec said that specifically or would require that. And thus, in the context of the spec, I'm not seeing how a POSITA would understand the claim phrase to be limited to information must be in the message* because the claim says what it

says and provides *an example of user preferences* information.

EX2011, 46:19-47:8; *see also* 44:3-16 ("*I recall nothing from the spec* that discussed that the user preference or other information autonomously provided to the server has to be *literally data that's literally in the message* itself."); 46:1-5 ("*Even if it's required that it has to be a word literally in the message, which I don't see in the ['414] spec anywhere* that that's the requirement of the information taken from a message ..."); 175:22-176:8 ("... I saw *no such description* like that about *how to take information from a message* in -- from the '414 specification."); 36:8-18; 38:17-39:10; 47:19-48:9 (similar).

Petitioner's Dr. Houh incorrectly construed “taken” because he misread the specification

Patent Owner's Dr. Malek

64. Dr. Houh therefore reached the incorrect conclusion that merely deriving data from messages is in the scope of the claims, pointing to the '414 specification's discussion of user preferences. EX2011, 173:9-19 (alleging that “deriving a profile from a message” is “an example of how to take information from something else.”).

EX2009, ¶ 64

Petitioner's Reply: no rebuttal

See Reply at 1-6

Petitioner relies on data derived—not taken—from a message

Petitioner's Reply

As discussed above, “*information taken...from a message*” is not limited to “information that was actually in a message” (e.g., identical text) and includes “data ‘derived’ from a message.” Thus, Wildseed’s §III.B.1.a (POR, 20-24) arguments fail, because even if Kawasaki’s data is derived from messages, as Wildseed contends, Kawasaki meets the limitation. Wildseed presents no argument against

Reply at 11

Patent Owner's Dr. Malek

a. **Kawasaki clients do not send information taken from messages.**

1. **Kawasaki uses data derived, not taken, from messages.**

83. As Petitioner and Dr. Houh concede, Kawasaki’s unknown data and profile are “derived” from messages—not information that was part of any message. Pet., 38; EX1003, ¶112. The unknown data and the profile are not data taken from messages. Instead, they are the input and processed output of Kawasaki’s “recognizers.” Kawasaki discloses using recognizers to classify

EX2009, ¶ 83

Information taken from a message = data that was in a message

Patent Owner's Dr. Malek

A. “[I]nformation taken ... from a message” requires information that was actually in a message (limitations 1.1.2, 9.4, 12.3.2, 14.3.2).

57. The plain meaning of the claim term “taken,” when interpreted in light of the specification and file history, requires using information that was in a message, not merely data “derived” from a message, as Petitioner alleges. Pet., 38.

58. The specification teaches directly using information that is in a message, as opposed to indirectly deriving information from a message where the derived information may or may not exist in the message. Figure 8 of the '414 patent and accompanying discussion refer to testing for the presence of multiple types of data, and if a given type of data exists, then adding that actual data to information about a user.

Data taken from a message doesn't have to be the entirety of the message

Petitioner's Reply

example, Dr. Malek contends that, for location and demographic data, Figure 8 mandates “that exact data” (i.e., the available data) be added to information about the user (Ex.2009, ¶60), but during deposition he was unwilling to state the same applied for messages or specify what information from a message is added and instead avoided the issue. See, e.g., Ex.1028, 35:8-42:14. That is, while Dr. Malek

Reply at 3-4

doesn't detail what's sent to a server; moreover, it is unclear whether the entire message, a subset thereof, the characteristic, or something else is added to the “user's information.” Thus, the specification doesn't limit “information taken...from a

Reply at 5

Patent Owner's Dr. Malek

Q. So if data is extracted from the message, it would satisfy limitation 1(a)?

A. Yes. So in this case, it's the data that is part of the message, and it's the data that is taken from that message.

...

THE WITNESS: It doesn't have to be the entirety of the message, if that's what you're asking me. So the claim requires the information taken from a message. It doesn't have to be the entirety of the data of the message.

EX1028, 39:8-40:5,
see also 44:11-45:2 (phone number),
49:16-24 (email or game)

Specification teaches using [1] exact data, and [2] information derived from data; “taken” uses [1] exact data

Petitioner’s Reply

concept. POR, 4. Rather, because Figure 6’s modules “provide different types of information, which in total are employed to **generate information** regarding a user of the mobile device,” it is logical to interpret the patent as encompassing more than just using “exact data.” Ex.1001, 9:48-51. The phrase “*information...taken from a*

Reply at 3

Patent Owner’s Dr. Malek

66. Thus, the specification expressly teaches taking the data from a message by using the actual data that was in a message. It does not refer to data as “taken” from a message if that data is merely derived from a message. EX1001, 10:7-18; *see also* EX1001, 11:31-37. In sum, the specification provides examples that distinguish data taken from a message and other information that is derived; the claims recite the former.

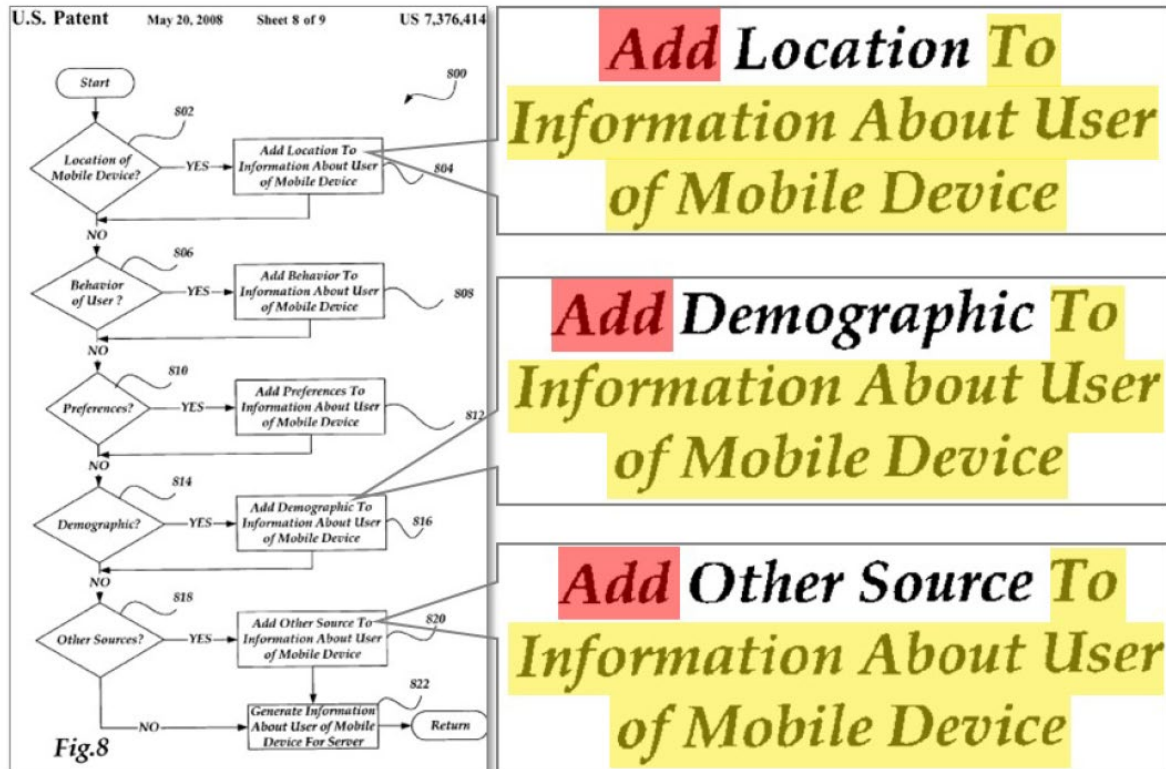
EX2009, ¶ 66

I mean, as I said earlier, the patent talks about two ways of obtaining information. One is exact data that is -- that is taken and included above the information about the user, and one is derived data.

So it does also include the derived data, but the part that is claimed, the claims are targeting the embodiment where you are taking information from the message. You are taking exact data.

Take data such as GPS coordinates, not information derived from data

Patent Owner's Dr. Malek



EX1001, FIG. 8, annotated.

60. Thus, if location data exists, that exact data—*e.g.*, the location data entered by the user or provided from GPS—is added to information about the user.

Similarly, if demographic data exists, that exact data is added:

... a determination is made as to whether at least one *demographic* piece of *information* regarding the user is provided. If true, the process steps to block 816 where the *demographic information* is added to other *information* regarding the mobile device user.”

EX1001, 11:5-9.

EX2009, ¶ 60; see also EX2009, ¶ 58

File history rejected claims: data generated from a message; allowed claims: data taken from a message

It is undisputed the Examiner rejected claims that used information generated from a message (i.e., a profile), but allowed those claims after they required using information “taken” from a message.

Patent Owner’s Dr. Malek

67. The file history reinforces that information “taken” from a message means information that was actually in the message. The Examiner understood the claim limitation to require data that was in a message—not merely data “derived” from a message. The Examiner rejected pending claims based on art that disclosed selecting ads using a profile that was derived from messages. After the requirement to “take” information from messages was added to the claims—and no other limitations were added—the Examiner allowed the claims.

EX2009, ¶ 67

Patent File History

However, Sass in view of Owensby *do not disclose*: providing to a server, by a cellular device, information taken by the cellular device from a message sent to the cellular device from another user of another cellular device . . .

EX1002, 36-37

Petitioner’s Reply

The file history does not support Wildseed’s narrow interpretation. While Owensby selected ads based on profiles, the examiner made no finding regarding whether Owensby even taught “a message sent to the cellular device from another user of another cellular device.” Indeed, the examiner did not cite the Owensby

Reply at 6

Recognizers output numbers, not text—let alone text from messages

Petitioner's Reply

Kawasaki does not suggest “the input (unknown data) is numbers that were generated by analyzing the messages” and Wildseed points to no evidence in Kawasaki to support this. Rather, Kawasaki states “[r]ecognizers are executed against **incoming unknown data** requested by Users” and “if a golfing Recognizer 23 is loaded and the **User views golf-related Web Pages 13a, E-mail 12a....**” Ex.1005, 4:32-41. **Users do not request numbers and do not view numbers—users view words** in email. Ex.1029, ¶¶26-27. When a user views golf-related email,

Reply at 12

Petitioner's Dr. Houh

“Recognizers.” Kawasaki’s Recognizers are “algorithms and rules” which “‘recognize’ a match of incoming, unknown data with Data Sets” corresponding to various areas of interest. Kawasaki, 4:6-31. These Recognizers “are executed against incoming unknown data requested by Users” and “the **statistical output from Recognizers 23 indicate whether** a given set of **unknown data** received or sent through the Internet 18 has a **good match** to the installed Recognizers 23.” Kawasaki, 4:32-37.

EX1029, ¶ 11

Kawasaki does talk in column 5, the first paragraph about **the output of recognizers.**

An example of the **output is "a matching rating** indicating the 'strength' or 'closeness' of the newly encountered data to known data sets 21." So I think that strength would be an example given in Kawasaki as to -- like a rating or percentage or **some number value** that isn't strictly true or false.

Recognizers output a numeric match rating to pre-existing categories —not text from messages

Patent Owner's Dr. Malek

85. The categories are “pre-defined,” so by definition existed before the message was analyzed, and therefore are *not taken from a message*. The predefined labels used to classify a message exist before a message is analyzed and fed to the neural network. A neural network model needs to be first trained. To train the neural network model, a labeled dataset is used. The labels are the classes/categories that are determined prior to training a neural network. To the extent Dr. Houh is pointing to Kawasaki’s Recognizers indicating the category (label) of messages to satisfy the limitation of taking information from messages, those categories (labels) exist before the messages are analyzed, and therefore cannot be information that is taken from messages.

EX2009, ¶ 85

Petitioner's Reply: no rebuttal

See Reply at 11-13

Kawasaki does not send “unknown data” to servers

Patent Owner’s Dr. Malek

93. According to Dr. Houh, “Kawasaki teaches that the “unknown data” scanned from the user’s content information, such as e-mail (“information associated with a user”), is provided “to a server” (the server performing the profiling).” *See* EX1003, ¶¶105, 122. There is, however, no such disclosure in Kawasaki. *See, e.g.*, EX1005, 5:66-67.

EX2009, ¶ 93

Petitioner’s Reply: no rebuttal

See Reply at 13

Kawasaki sends profiles, not data taken from messages; does not select ads based on data taken from messages

Patent Owner's Dr. Malek

86. Profiles are built using quantitative analysis of the match / no match numeric rating output from recognizers, and therefore, the profile that is built using those outputs is even further removed from information in a message. EX1005,

...

the set of installed *Recognizers* 23.”) Kawasaki discloses Profilers that receive the output of Recognizers, track and build an aggregate statistical model, “Profile,” of the User. See EX1005, 4:42-47. Therefore, the Profile of Kawasaki is just a statistical model, which is again expressed in the form numbers and the relationships among them. The Profile of Kawasaki does not contain information that is taken from the messages.

EX2009, ¶ 86

Petitioner's Reply: no rebuttal

advertisement server. See POR, 24-26; see also §III.B.1.a.2. Its only argument against this teaching is that the profile “does not have information ‘taken’ from a message” but this theory fails for multiple reasons, as detailed above: the claim doesn’t require extracting data from messages or sending to the server exact information contained in a message, but even if it did, it would have been obvious for a user who viewed an email with the word “golf” to have a profile reflective of her interest in golf. Kawasaki teaches the limitation.

Reply at 13

Kawasaki does not disclose the claimed messages

Patent

1. A method for playing content and advertisements on a cellular device, comprising:

- (a) autonomously providing to a server, by the cellular device, information associated with a user of the cellular device, the information taken by the cellular device from a message sent to the cellular device from another user of another cellular device, the message identifying characteristics of the user of the cellular device;
- (b) receiving from the server, by the cellular device, at least one advertisement to be played on the cellular device, wherein the at least one received advertisement is determined by the server based at least in part on the provided information;
- (c) if a determined time interval occurs, stopping playing of content, by the cellular device, and playing at least one of the determined advertisements, by the cellular device, the playing of the at least one determined advertisement comprising:
 - recording, by the cellular device, the content which playing was stopped, while the at least one determined advertisement is playing; and
 - when the playing of the at least one determined advertisement is completed, resuming the playing of the stopped content, by the cellular device, from where the stopping of the playing of the content occurred, using the recorded content.

- Claim 1 requires data that is taken from a message that meets two requirements: the message [1] is “from another user of another cellular device” (limitation 1.1.2) and [2] “identif[ies] characteristics of the user of the cellular device” (limitation 1.1.3).
- Petitioner has not identified anything in Kawasaki that suggests taking information from at least one message that [1] is “from another user of another cellular device” (limitation 1.1.2) and [2] “identif[ies] characteristics of the user of the cellular device” (limitation 1.1.3).

Kawasaki does not disclose the claimed messages

Petitioner's Reply

reflective of her interest in golf (1.1.3). Ex.1003, ¶114. At the time, it would have been obvious that such an email was received on a user's cellular device from a friend also using a cellular device (1.1.2). See Ex.1003, ¶¶119-123. This is

Reply at 14

Owensby selected ads based on profiles, the examiner made no finding regarding whether Owensby even taught "a message sent to the cellular device from another user of another cellular device." Indeed, the examiner did not cite the Owensby

Reply at 6

Patent Owner's Dr. Malek

b. Kawasaki does not disclose or analyze the type of messages that the claims require (limitations 1.1.2, 1.1.3).

96. Claim 1 requires data that is taken from a message that meets two requirements: the message [1] is "from another user of another cellular device" (limitation 1.1.2) and [2] "identif[ies] characteristics of the user of the cellular device" (limitation 1.1.3).

97. Petitioner has not identified anything in Kawasaki that suggests taking information from at least one message that [1] is "from another user of another cellular device" (limitation 1.1.2) and [2] "identif[ies] characteristics of the user of the cellular device" (limitation 1.1.3).

98. The other references in Petitioner's combination also do not provide any such teaching or suggestion, and Petitioner does not allege otherwise. Pet., 38-43.

EX2009, ¶¶ 96-98

Agenda

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- ▶ The Applied Art does not Render Obvious the “Information Taken” Limitations
- ▶ **The Applied Art does not Render Obvious the “Recording” (Caching) Limitations**
- ▶ No Motivation to Combine
- ▶ The Applied Art does not Render Obvious the Dependent Claims

Kauffman does not disclose playing content on an end user device—let alone a cellular device—while “recording” other content

Patent

1. A method for playing content and advertisements on a cellular device, comprising:

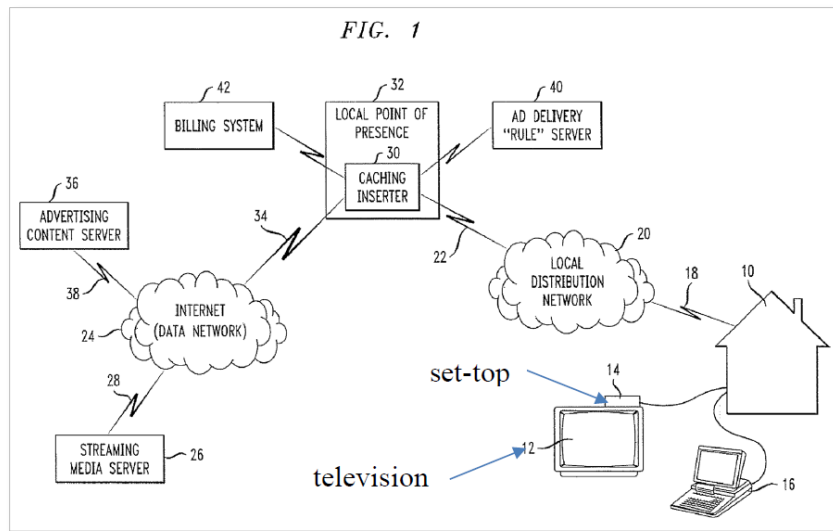
- (a) autonomously providing to a server, by the cellular device, information associated with a user of the cellular device, the information taken by the cellular device from a message sent to the cellular device from another user of another cellular device, the message identifying characteristics of the user of the cellular device;
- (b) receiving from the server, by the cellular device, at least one advertisement to be played on the cellular device, wherein the at least one received advertisement is determined by the server based at least in part on the provided information;
- (c) if a determined time interval occurs, stopping playing of content, by the cellular device, and playing at least one of the determined advertisements, by the cellular device, the playing of the at least one determined advertisement comprising: recording, by the cellular device, the content which playing was stopped, while the at least one determined advertisement is playing; and when the playing of the at least one determined advertisement is completed, resuming the playing of the stopped content, by the cellular device, from where the stopping of the playing of the content occurred, using the recorded content.

- Kauffman caches upstream of devices that play content—not at devices that play content as the claims require
- Petitioner’s impermissible new argument that cellular devices are “analogous” to a TV and set-top box combination is wrong
- Petitioner’s impermissible new argument that Kauffman teaches caching at “any” communications device is wrong

Kauffman caches upstream of devices that play content —not at devices that play content as the claims require

Petitioner's Reply

14.” POR, 33. Wildseed, in effect, **draws an invisible line between the set-top box 14 and television 12** in Kauffman’s Figure 1, and contends that Kauffman’s teachings of caching at set-top box 14 are irrelevant to caching at a cellular device; instead, **Kauffman would need to teach caching at the television 12.**

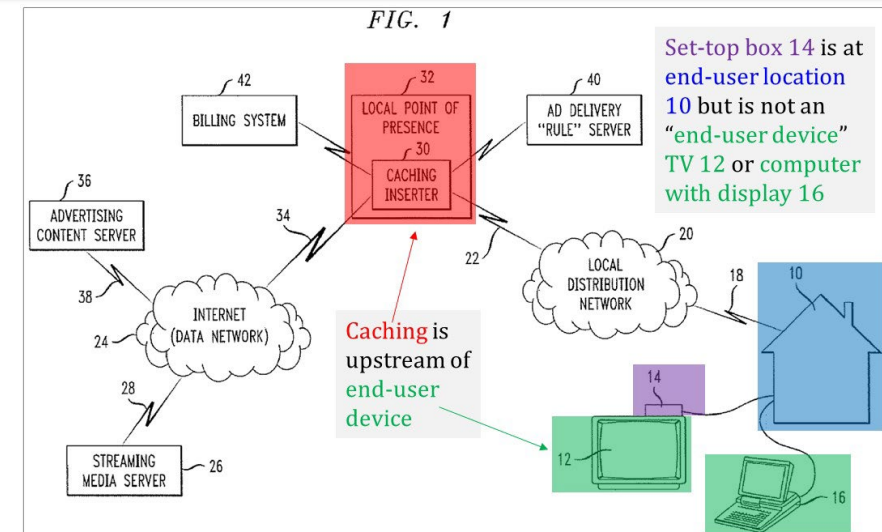


Reply at 16-17

Patent Owner's Dr. Malek

108. Kauffman teaches that the **“extreme” downstream position** for the **caching** inserter is at the end user’s location in a **set-top box**, and teaches that locating the caching inserter “further upstream” provides benefits:

[0009] The *POP* where the *advertisement cache* is located could be at any convenient place *along the signal path between the information source(s) and the end-user*. For example, the advertisement cache could be at the *headend*, or at a FTTH node in a neighborhood. **At the extreme**, the advertisement **cache** could be part of a **set-top box** *at the end-user location*. Obviously, the location of the advertisement cache



Petitioner's incorrect new argument: cellular devices are “analogous” to a TV and set-top box combination

Receiving and outputting media does not prove caching. For example, Kauffman's TV receives and outputs media, but does not cache, as Kauffman expressly teaches.

Petitioner's Reply

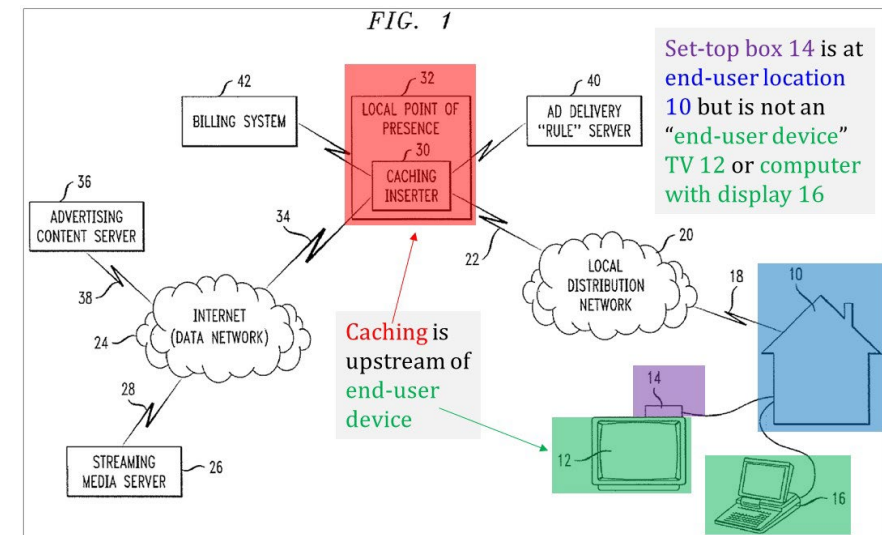
at a cellular device. For example, Kauffman's TV is a media output device, akin to a cellular device's speaker; thus, accompanying hardware (e.g., a set-top box) would be needed to receive and playback content (including caching as Kauffman teaches).

Ex.1029, ¶¶44-48. This combined set-top box and TV is analogous to a cellular device that receives and plays content using a speaker. Likewise, Kauffman's

Reply at 17-18

Patent Owner's Dr. Malek

177. Kauffman disclosed caching upstream from—not at—TV 12 and computer terminal 16, for example to play content “on” TV 12 that it received



EX2009, ¶¶ 105, 177

Petitioner's incorrect new argument: Kauffman teaches caching at any communication device

Petitioner's Reply

But this narrow view is contrary to a POSITA's understanding. Kauffman explicitly teaches locating a caching inserter at any "communication [] device at an end-user location." Ex.1006, cl.17. Dr. Malek concedes that computers, such as Kauffman's computer 16, are communication devices, and a cellular device would have been recognized as a computer (one which is, per the patent's admissions,

Reply at 17

Kauffman

12. The arrangement as defined in claim 2 wherein the arrangement is disposed at a local point of presence in a communication network.

17. The arrangement as defined in claim 12 wherein the arrangement is disposed in a communication is device at an end-user location.

Ex 1006, cl. 12, 17

Patent Owner's Dr. Malek

That's why I wouldn't want to kind of go as far as saying that it's a communication device. But

EX1028, 107:22-23

Q. What makes a mobile device a cellular device?

A. I would say -- I mean, generally speaking, I would say it's the fact that it has cellular capabilities.

Agenda

- ▶ The '414 Patent
- ▶ The Applied Art does not Render Obvious the “Information Taken” Limitations
- ▶ The Applied Art does not Render Obvious the “Recording” (Caching) Limitations
- ▶ **No Motivation to Combine**
 - ▶ **No motivation to combine cell phones with neural networks**
 - ▶ No motivation to combine Frerichs’ cell phone with Kauffman’s caching
 - ▶ No motivation to combine all three references
- ▶ The Applied Art does not Render Obvious the Dependent Claims

No motivation to combine Frerichs' cell phone with Kawasaki's recognizers

- Petition requires combining Frerichs' cell phone with Kawasaki's "Recognizers" Reply at 8 ("The Petition relied upon Kawasaki's recognizer teachings, applied to Frerichs' cellular phone ...")
- Undisputed: There is no motivation to combine Frerichs' cell phone with Kawasaki's neural networks.
- "Recognizers" are neural networks. Petitioner's Dr. Houh contradicts his sworn testimony admitting that fact.
- Petitioner's new theory that Kawasaki's neural networks output "regular expression" text is wrong, and text cannot perform the functions that Recognizers perform
- Regardless of the neural network issue, Kawasaki's "Recognizers" cannot run on Frerichs' cell phone

Undisputed: No motivation to combine phone with neural networks

There is no motivation to combine Frerichs' cell phone with Kawasaki's neural networks.

Petitioner never asserts otherwise. Petitioner now admits that Kawasaki requires neural networks but asserts the combination does not require neural networks.

Patent Owner's Dr. Malek

- a. A POSITA would **not have been motivated to combine Kawasaki's artificial intelligence neural networks with a cell phone**, which was not technologically feasible at the time of the '414 patent.

1. Petitioner fails to address the fact that its proposed combination requires a cell phone to run a neural network.

124. **Kawasaki requires a neural network.** Although Dr. Houh admitted at

EX2009, ¶ 124

4. Any benefits of combining Kawasaki and Frerichs could be achieved without the unnecessary and unprecedented feat of running a neural network on a cell phone.

153. **Petitioner does not offer any reason to combine Kawasaki's neural networks with a cell phone.** Pet., 27-30; EX1003, ¶¶ 69-75. Petitioner merely

EX2009, ¶ 153

Petitioner's Reply: no rebuttal

G. A POSITA Would Have Combined Frerichs and Kawasaki

Wildseed argues the Petition did not show "sufficient motivation to combine Frerich's cell phone with Kawasaki's neural networks." POR, 34-46; *see also* §III.B.4.a. But because this argument relies on the incorrect assumption that Kawasaki requires neural networks to execute on the end-user's device, addressed *supra*, these arguments do not establish patentability.

Again, while **Kawasaki uses neural networks**, incorporating Kawasaki's teachings **does not require running neural networks on client devices** (e.g., cellular devices), and thus the proposed combination **does not require** a 2001-era cellular device to run or develop a neural network. Thus, analyzing whether such a device

POR at 35-36, 41-42; PO Sur-Reply at 12-13, 21-22

Reply at 18

Undisputed: Recognizers are the output of neural networks

Petitioner's Reply

described in the above-referenced patent application....**The output from Neural Net 22 is algorithms and rules, the Recognizers 23,** which in essence “recognize” a match of incoming, unknown data with Data Sets 21.

Ex.1005, 4:13-25.

Reply at 8, quoting Kawasaki

output neural networks themselves, and agrees the “**output of the training of the neural networks,** which is 22, is algorithms and rules, which are the **recognizers.**”

Ex.1028, 83:20-84:24. This is consistent with Kawasaki, which does not describe

Reply at 10, quoting Patent Owner's Dr. Malek

Kawasaki's "recognizers" are neural networks

Patent Owner's Dr. Malek

51. The "recognizers" in Kawasaki are neural networks. EX2011, 40:10-14 ("... the *recognizer* discussed and presented in Kawasaki ... [is] the kind of *neural network* analyzer that Kawasaki is talking about.").¹ Kawasaki states that

EX2009, ¶ 51

52. The recognizers 23 are trained neural networks. Additional disclosures in Kawasaki reinforce this fact. Kawasaki states that it uses analytic

EX2009, ¶ 52

a. A POSITA would not have been motivated to combine Kawasaki's artificial intelligence neural networks with a cell phone, which was not technologically feasible at the time of the '414 patent.

1. Petitioner fails to address the fact that its proposed combination requires a cell phone to run a neural network.

124. Kawasaki requires a neural network. Although Dr. Houh admitted at his deposition that Kawasaki relates to neural networks, Petitioner and Dr. Houh's declaration do not acknowledge or address the fact that Kawasaki requires running artificial intelligence neural networks. Pet., 24-25, 35-43; EX1003, ¶¶ 51-58, 100-

EX2009, ¶ 124

Petitioner's Dr. Houh contradicts his sworn testimony that "recognizers" are neural networks

Petitioner's Dr. Houh: Supplemental Declaration

20. The difference between neural networks and the Kawasaki recognizers is also consistent with Dr. Malek's testimony, where he acknowledges that the "development of algorithms and weighted rules to analyze the unknown content is achieved through a three-tier feed-forward artificial neural network." Ex. 2009, ¶ 55 (citing Kawasaki, 4:6-32). This distinction, that a neural network is used to **develop** algorithms and weighted rules, is blurred by Dr. Malek, but it is an important distinction to make, and confirms that the **recognizers** in Kawasaki **are not** **neural networks** themselves.

EX1029, ¶ 20

Petitioner's Dr. Houh: Deposition

So the example I gave, I'm not gonna deny, didn't use the word golf, and it can still discern -- the **recognizer** discussed and presented in Kawasaki can still discern that kind of interest in golf because it uses a lot of golf-related terms for example. And that's the kind of **neural network** analyzer that Kawasaki is talking about.

EX2011, 40:8-14

or something, it may not -- the point is that these kind of **neural network recognizers**, they don't have to use the words that provide the data set match because the recognition models are more advanced than simple-keyword matching. And so I think

EX2011, 177:1-5

Petitioner's Dr. Houh contradicts his sworn testimony that “recognizers” are neural networks

Petitioner's Dr. Houh: Deposition (continued)

But, certainly, what's disclosed in Kawasaki, for example, with respect to the neural networks, is recognizers are really a series of additions and multiplications typically in a neural network. That's how they work. Which, you know,

EX2011, 150:15-19

A. So what I'm looking for in answering your question in Kawasaki, I'm not sure it says -- it talks specifically about those steps with respect to what's part of a recognizer, but I think it does talk that there is scanning and whether the recognizer is just a network, a neural network model

or includes the scanning, I mean, it's -- I don't see Kawasaki talking about that specific question.

EX2011, 184:17-185:2

Train neural networks to create neural networks that recognize patterns in unknown data

Untrained neural networks are trained using known (“labelled”) data that has answer keys.
Only trained networks work with unknown data that has no pre-existing answer key.

Petitioner’s Dr. Houh

And then that's what happens in the training process, which is that you feed in data, you might compare it against a known set of label data. And you want to have the best statistical, predictive match for the network when you run it on a test set of data. And it may require many, many rounds of training. And that's partly why training a model is computationally intensive.

...

concept, whether a neuron fires or not. And if the neuron fires, you may have a positive match for whatever you're -- whatever model you're looking for that it's trained on. And if you have a negative, if it doesn't fire, then it's saying it doesn't recognize that.

EX2011, 178:9-179:10

Patent Owner’s Dr. Malek

corresponding neuron to be 1, and otherwise 0. Given a labelled dataset (*i.e.*, a dataset where the desired classification for each input is known), we can then train a neural network model. The training algorithm sets the weights in the hidden layer neurons to reduce the classification error. These weights determine how the values propagate throughout the network to produce the final output. The final output from the neural network is one or more numbers indicating whether the input belongs to a particular class. The actual number depends on the activation function.

EX2009, ¶ 56

with the words are refined to reduce the neural network’s classification error. At the operation stage (*i.e.*, during usage of a previously trained neural network model), a page should be first scanned/parsed to collect the words that appear on it.

EX2009, ¶ 129

Trained neural networks and Recognizers perform the same function: output numbers indicating match to category

Petitioner's Dr. Houh

“Recognizers.” Kawasaki’s Recognizers are “algorithms and rules” which “‘recognize’ a match of incoming, unknown data with Data Sets” corresponding to various areas of interest. Kawasaki, 4:6-31. These Recognizers “are executed against incoming unknown data requested by Users” and “the statistical output from Recognizers 23 indicate whether a given set of unknown data received or sent through the Internet 18 has a good match to the installed Recognizers 23.” Kawasaki, 4:32-37.

EX1029, ¶ 11

Patent Owner's Dr. Malek

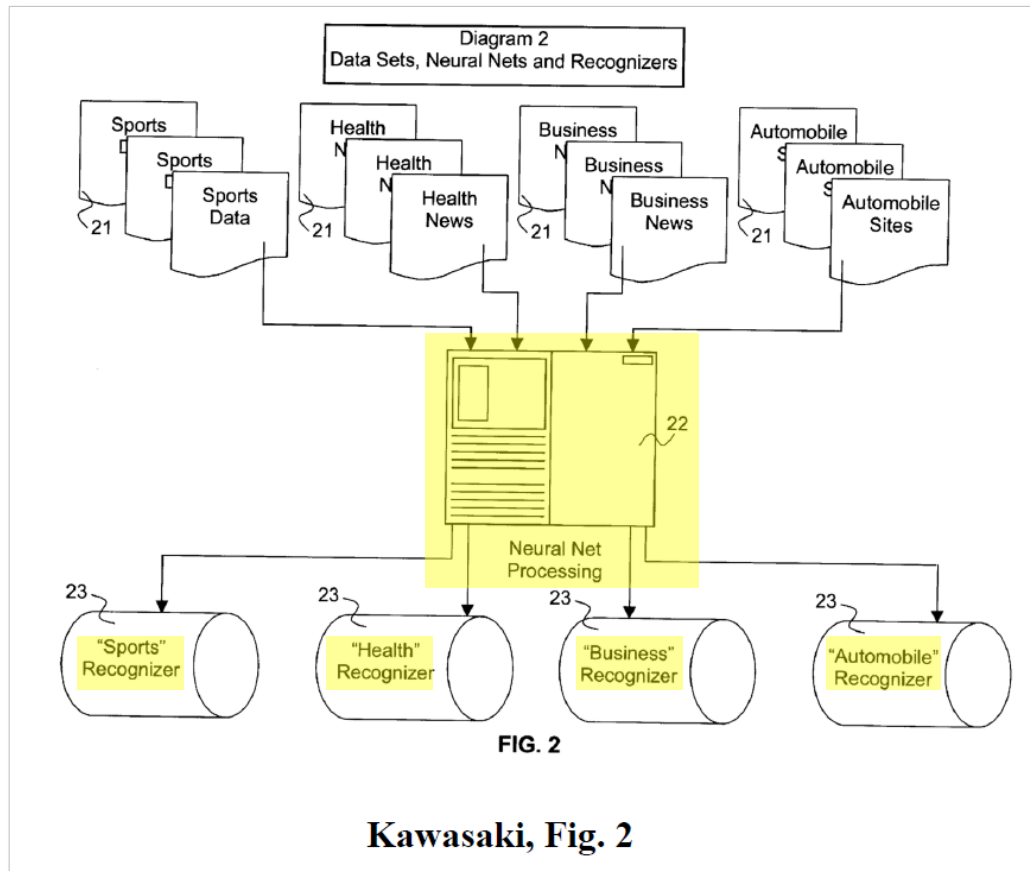
propagate throughout the network to produce the final output. The final output from the neural network is one or more numbers indicating whether the input belongs to a particular class. The actual number depends on the activation function.

In the simplest case, the output could be a 1 if the neural network determines the input belongs to a particular class (e.g., the document deals with a particular subject), and 0 otherwise.

EX2009, ¶ 56

Train neural networks to create multiple recognizers, e.g., one or more categories per recognizer

Petitioner's Dr. Houh



of different ways. So you could have a recognizer that, in parallel, you know, has been trained on, you know, a dozen different categories, for example. And you can feed in data at the input, and then at the output get all 12 categories, whether they're yes or no. So it could be golf and sports, you know, whatever the categories are. It's just how you train the model and how you label the input data. And --

EX2011, 180:13-21

EX1029, ¶ 17

“Neural networks” and “algorithms and weighted rules” are two ways to describe the same thing

Petitioner’s Dr. Houh

mathematical, which is -- first of all, you have to train the model. And you **train the model** based on feeding in data and comparing outputs and feeding back errors and with all different **weights** involved to **adjust weights in the model**. And there are mathematical ways of using error terms to adjust **weights of different nodes in the neural network** in different ways.

...

But then when you -- when you have a model, the **models are simply**, really, kind of, **weights** and nodes along the **neural network** that -- connections in the network between various nodes. And

EX2011, 178:1-20

Patent Owner’s Dr. Malek

134. In that time frame, a POSITA would have known it is not possible to run Kawasaki’s recognizers on a mobile device. Kawasaki discloses its recognizers are built using advanced forms of **machine learning algorithms known as Neural Networks**. EX1005, 4:16-24 (“The development of these **algorithms and weighted rules** is accomplished through the use of a three-tier feed-forward artificial **neural network**, a **Neural Net** 22, with a learning **algorithm** as described in the above-referenced patent application. Various artificial neural networks are commercially available that could be used for this purpose. The output from Neural Net 22 is **algorithms and rules, the Recognizers** 23, which in essence “recognize” a match of incoming, unknown data with Data Sets 21.”).

EX2009, ¶ 134

Once trained, a neural network is smaller and more compact than an untrained neural network

Petitioner's Reply

Ex.2011, 148:12-16 (“Once trained, there are really just a set of parameters and, kind of, a structure for – with various parameters and weights in the system that can be run on many devices.”); Ex.1029, ¶¶9-24.

Petitioner's Dr. Houh

Reply at 10

A. I mean, later in the 2000s, I definitely ran neural network models on a laptop computer.

...

A. Well, Kawasaki actually talks about various neural networks, and this is filed in '99 I think.

...

And so as I said, you can generate the model that typically requires more computation, but the model itself can be run on devices. Once trained, there are really just a set of parameters and, kind of, a structure for -- with various parameters and weights in the system that can be run on many devices. And they may not actually require much computation work depending on the architecture of the neural network.

Patent Owner's Dr. Malek

power or RAM to run the neural networks. The cited Kawasaki sentence refers to distributing “small and compact” recognizer neural networks as updates. EX1005, 4:29-31 (“... because Recognizers 23 are very *small and compact*, dynamically generated *Recognizers 23* are used for electronic *distribution and updates*.”). Specifically, distributing (1) smaller, trained recognizer neural networks, instead of (2) a larger, untrained Neural Net 22, which Kawasaki refers to in the preceding paragraph. EX1005, 4:17-24 (“The development of these algorithms and weighted

EX2009, ¶ 161

Neural networks output numbers, not text such as regular expressions

Neural networks output numbers, not text. Even in the Kawasaki passage Dr. Houh quotes, only the “neural-net assigned weights”—not the regular expressions—are from neural networks.

Petitioner’s Dr. Houh: Supplemental Declaration

to predetermined characteristics.” Ex.2009, ¶54. The focus of the ’664 Patent is the **training of a neural network**, using large quantities of training data. However, the **output** in the ’664 Patent is a “**list of regular expressions** along with **neural-net assigned weights**” which are used to characterize a web page as containing potentially offensive content. See Ex.1024, 8:21-30. A regular expression is a form of a rule, as it is a pattern used to match character combinations in strings of text. A dictionary explains that regular expressions “are derived from various strands of mathematical theory.” Webster’s Computing Dictionary, pp. 315-316. Thus, the ’664 Patent’s **regular expressions** are one form of “algorithms and rules” that are the **output of a neural network** in Kawasaki.

EX1029, ¶ 22

Petitioner’s Dr. Houh: Deposition

A. Well, and then in that way, you can **train the model to produce results**. You can train a model with one **output**. You can train a model with a dozen outputs. You can train a model with a hundred outputs. It's just how you set up what you're doing.

Q. So regardless of whether it's a binary classifier or a multi-classifier, aren't you still **outputting some number**? It's either, you know, true or false, or here's a confidence level represented by some **number**?

A. **Right.** It could be either, or it could be

EX2011, 181:2-13

Neural networks output numbers, not text such as regular expressions

Patent Owner's Dr. Malek

propagate throughout the network to produce the final output. The final output from the neural network is one or more numbers indicating whether the input belongs to a particular class. The actual number depends on the activation function.

In the simplest case, the output could be a 1 if the neural network determines the input belongs to a particular class (*e.g.*, the document deals with a particular subject), and 0 otherwise.

EX2009, ¶ 56

Regular expressions are merely text

Petitioner's Dr. Houh: Supplemental Declaration

potentially offensive content. *See* Ex.1024, 8:21-30. A regular expression is a form of a rule, as it is a pattern used to match character combinations in strings of text. A

...

23. Evaluating regular expressions like the examples given in the '664 patent is not computationally intensive, and a POSITA would have understood how regular expressions could be used to implement Kawasaki's recognizers. For

EX1029, ¶¶ 22-23

rules (e.g., regular expressions as shown in the '664 patent). As the '664 patent shows, regular expressions are no more than lines of text used to recognize patterns in text, and indeed are "small and compact" and easy to distribute consistent with

EX1029, ¶ 35

Text cannot perform Recognizers' functions; neural networks perform Recognizers' functions

Petitioner's Dr. Houh: Supplemental Declaration

12. In other words, Recognizers process the scanned content of the user's incoming unknown data (e.g., scanned content of the user's e-mail), and determine whether the content is relevant (recognizable) to a certain category of interest. In one

EX1029, ¶ 12

potentially offensive content. See Ex.1024, 8:21-30. A regular expression is a form of a rule, as it is a pattern used to match character combinations in strings of text. A

...

23. Evaluating regular expressions like the examples given in the '664 patent is not computationally intensive, and a POSITA would have understood how regular expressions could be used to implement Kawasaki's recognizers. For

EX1029, ¶¶ 22-23

rules (e.g., regular expressions as shown in the '664 patent). As the '664 patent shows, regular expressions are no more than lines of text used to recognize patterns in text, and indeed are "small and compact" and easy to distribute consistent with

EX1029, ¶ 35

Patent Owner's Dr. Malek

54. Artificial intelligence neural networks are the only method that the related '664 patent discloses for generating a rating that indicates a match compared to predetermined characteristics.

... in a neural network system, rating the examined web page using the weightings in the weight database;

...

... regular expressions that are useful in a neural network system in discriminating web page content relative to the predetermined content characteristic.

...

... analyzing the web page natural language content relative to a predetermined database of regular expressions, and using a neural network system to form a rating ...

EX1024, 11:30-33, 11:53-55, 12:6-9.

EX2009, ¶ 54

Dr. Houh's new theory that recognizers process text contradicts his sworn testimony that recognizers perform math on numbers.

Petitioner's Dr. Houh: Supplemental Declaration

potentially offensive content. See Ex.1024, 8:21-30. A **regular expression** is a form of a rule, as it is a **pattern** used to match character combinations in **strings of text**. A

...

23. Evaluating regular expressions like the examples given in the '664 patent is not computationally intensive, and a POSITA would have understood how **regular expressions could be used to implement Kawasaki's recognizers**. For

EX1029, ¶¶ 22-23

Petitioner's Dr. Houh: Deposition

But, certainly, what's disclosed in Kawasaki, for example, with respect to the neural networks, is **recognizers are really a series of additions and multiplications** typically in a neural network. **That's how they work.** Which, you know,

EX2011, 150:15-19

down. It's just **simple math** into a series of **arithmetic** operations. And when I say "**arithmetic**," I mean things like **add, multiply**, things like that.

EX2011, 179:13-15

Putting aside the neural network requirement, recognizers cannot run on Frerichs' cell phone

Dr. Malek explained why Frerichs' 2001-era cell phone could not perform a recognizer's functions, for reasons that apply even under Petitioner's incorrect theory that recognizers are not neural networks.

Patent Owner's Dr. Malek

retrieved to calculate a score. *See* EX2027, 4:66-5:35. Dr. Houh has not considered the overhead of extracting this information from email messages on a 2001-era mobile device. In my opinion, the computing and battery resources available on a 2001-era mobile device would have not allowed for a system that scanned and parsed all the words of each received email, and repeatedly queried a database for each of those words.

EX2009, ¶ 129; *see also* EX2009, ¶ 131

Petitioner's Reply: no rebuttal

See Reply at 7-11, 18-19

Any combination of Kawasaki and Frerichs would run on a server, not a cell phone

Patent Owner's Dr. Malek

client devices.”). Petitioner points to no reason for, or benefit from, combining
clients instead of servers.

EX2009, ¶ 154

Petitioner's Reply: no rebuttal

See Reply at 7-11, 18-19

Agenda

- ▶ The '414 Patent
- ▶ The Applied Art does not Render Obvious the “Information Taken” Limitations
- ▶ The Applied Art does not Render Obvious the “Recording” (Caching) Limitations
- ▶ **No Motivation to Combine**
 - ▶ No motivation to combine cell phones with neural networks
 - ▶ **No motivation to combine Frerichs’ cell phone with Kauffman’s caching**
 - ▶ No motivation to combine all three references
- ▶ The Applied Art does not Render Obvious the Dependent Claims

No motivation to combine Frerichs' cell phone with Kauffman's caching

- Petition's combination required Frerichs' cell phone for the claimed "cellular device" and Kauffman's caching for the "recording" limitation. Reply at 7 ("Kauffman's teachings of caching ... combined with Frerichs' teachings of a cellphone.")
- Petitioner alleges a motivation to combine Kauffman with Frerichs to avoid delay when switching back to a stream
 - But Frerichs never switches back to a stream
- Petitioner never cites any reason to use a cell phone. Petitioner notes Kauffman applies to audio, not just video.
 - That is irrelevant. Patent Owner's Dr. Malek did not rely on video.
- Petitioner cites a so-called admission that cell phones could stream content.
 - That is irrelevant. Frerichs already teaches cell phones streaming content. But not caching content as claimed.

Sole alleged motivation to combine —no delay when switching back to a stream—is irrelevant

Petitioner alleges a motivation to combine Kauffman with Frerichs to avoid delay when switching back to a stream

- But Frerichs never switches back to a stream

Petitioner's Reply

Dr. Houh explained: “caching paused streaming media content during the playback of an advertisement, as taught by Kauffman, would have been advantageous” because it “would allow the paused content to be immediately resumed after the end of the advertisement’s playback by playing the content from the cache, without further delay caused by retrieval of the streaming media content.”

Reply at 21

Patent Owner's Dr. Malek

content while playing a streamed ad, as claim 7 requires. Rather, a single stream that already includes ads is similar to normal radio broadcast: the client simply plays whatever it receives, ad or otherwise, without caching another stream of content. Inserting an ad into a stream does not show caching the stream for later playback while the inserted ad is played: Frerichs inserts an ad without caching the streamed content for later playback. The original content is played at a lower

EX2009, ¶ 118

Any combination would not use a cell phone, even for audio

Petitioner never cites any reason to use a cell phone.

Petitioner notes Kauffman applies to audio, not just video.

- That is irrelevant. Patent Owner's Dr. Malek did not rely on video.

Patent Owner's Dr. Malek

3. Any benefits or expectations of success from combining Kauffman and Frerichs apply, if at all, to client devices that are more powerful than cell phones.

174. Petitioner does not cite any reason why a POSITA combining Frerichs and Kauffman would choose a cell phone as a client, instead of the computer, TV, or set-top box disclosed in both references. Pet, 30-34; EX1006, ¶9, 3 (“play the

EX2009, ¶ 174

Petitioner's Reply

Next, Wildseed argues “benefits or expectations of success...apply, if at all, to client devices that are more powerful than cell phones.” POR, 52-55. Wildseed bases its arguments on a misguided view that Kauffman only provides teachings relevant to video. See POR, 53-54. But “Kauffman’s techniques are applicable to a wide variety of computing devices” and, although Kauffman “describes techniques with reference to a ‘video stream,’ a POSITA would have understood it to also be applicable to audio streams” in part because audio is less complex than video.

Reply at 22

Frerichs' cell phone was incapable of being Kauffman's client; cell phones could stream audio, but did not cache as claimed

Petitioner cites a so-called admission that cell phones could stream content.

- That is irrelevant. Frerichs already teaches cell phones streaming content. But not caching content as claimed.

Petitioner's Reply

used for streaming media content in 2001" (POR, 55) are again distractions, as the patent admits that cellular devices were capable of advanced features "such as playing streamed content." Ex.1001, 1:39-41; *see also Qualcomm Inc. v. Apple Inc.*,

Reply at 23

Petition

1. Summary of Frerichs

Frerichs relates to "inserting advertisements into streaming audio."

Ex.1004, Abstract. Frerichs describes a method which "includes transmitting audio data from a first server location to a client location." *Id.* Frerichs notes that client devices may include "personal digital assistants, internet appliances, internet radio, cellular phones, and the like." *Id.*, 1:16-20.

Pet at 23

Patent Owner's Dr. Malek

Petitioner admits that Frerichs does not cache as required by the claims. Pet., 32

EX2009, ¶ 104

else required for receiving and presenting streaming audio. EX1003, ¶86. Further, even if a cell phone theoretically could have cached streaming audio for later playback, there is no evidence in this proceeding that cell phones in 2001 actually performed such caching.

EX2009, ¶ 179

181. Adding Kauffman's caching inserter to a cell phone would pose additional technical challenges that Petitioner, Frerichs, and Kauffman do not address. Furthermore, these challenges would have been completely unnecessary because a POSITA would simply put Kauffman's caching inserter upstream of the end-user device—exactly as Kauffman teaches. EX1006, ¶9.

EX2009, ¶ 181 51

Agenda

- ▶ The '414 Patent
- ▶ The Applied Art does not Render Obvious the “Information Taken” Limitations
- ▶ The Applied Art does not Render Obvious the “Recording” (Caching) Limitations
- ▶ **No Motivation to Combine**
 - ▶ No motivation to combine cell phones with neural networks
 - ▶ No motivation to combine Frerichs’ cell phone with Kauffman’s caching
 - ▶ **No motivation to combine all three references**
- ▶ The Applied Art does not Render Obvious the Dependent Claims

No motivation to combine all 3 references

- Petitioner provides no motivation to combine all 3 references. Combining 3 references is harder than combining 2.
- Petitioner now asserts that motivation to combine is not required.
 - But that is wrong.
 - Federal Circuit “precedent dictates that the PTAB must make a finding of a motivation to combine when it is disputed.” *In re NuVasive, Inc.*, 842 F.3d 1376, 1382 (Fed. Cir. 2016)

No motivation to combine all 3 references

Petitioner provides no motivation to combine all 3 references. Combining 3 references is harder than combining 2.

Petitioner now asserts that motivation to combine is not required.

- But that is wrong. Federal Circuit “precedent dictates that the PTAB must make a finding of a motivation to combine when it is disputed.” *In re NuVasive, Inc.*, 842 F.3d 1376, 1382 (Fed. Cir. 2016)

Patent Owner's Dr. Malek

- c. A POSITA would **not have been motivated to combine all three references** because such a combination would pose even more challenges than either combination alone.

182. Petitioner suggests reasons for combining Frerichs and Kawasaki, and for combining Frerichs and Kauffman. Unsurprisingly, **Petitioner does not cite any reasons to combine all three references together** in order to create its proposed

...

183. Petitioner's suggested combination would require a 2001-era cell phone to perform feats that no cell phone from that era ever did or was capable of doing. Petitioner's hypothetical cell phone would need to run artificial intelligence neural networks, while also processing and caching streaming content for later playback on the device. **Combining all of those technologies into a cell phone would have been beyond the skill of a POSITA at the time.**

Petitioner's Reply

Finally, Wildseed argues a “POSITA would not have been motivated to combine all three references because such a combination would pose even more challenges than either combination alone.” POR, 56-57. Again, these arguments are based on its misinterpretations and not commensurate with the references' teachings. And importantly, **a motivation to combine all three references is not required**; at

Reply at 23

Agenda

- ▶ The '414 Patent
- ▶ The Applied Art does not Render Obvious the “Information Taken” Limitations
- ▶ The Applied Art does not Render Obvious the “Recording” (Caching) Limitations
- ▶ No Motivation to Combine
- ▶ **The Applied Art does not Render Obvious the Dependent Claims**
 - ▶ **Radio station data is not taken from a message (Claims 2, 3, 10, and 13)**
 - ▶ Petitioner never cited Kawasaki for claims 4 and 11 before its Reply
 - ▶ Kauffman does not cache at the device that plays content (Claim 7)

Claims 2, 3, 10, and 13 require information taken from a message

1. A method for playing content and advertisements on a cellular device, comprising:

- (a) autonomously providing to a server, by the cellular device, information associated with a user of the cellular device, **the information taken** by the cellular device **from a message** sent to the cellular device from

...

2. The method of claim 1, wherein **the provided information** additionally includes at least one of the group consisting of a preference of a user of the cellular device, a demographic data of the cellular device, content played on the cellular device, or a geographic location of the cellular device.

3. The method of claim 2 wherein **the provided information** additionally includes at least one selected from the group consisting of a game played on the cellular device, a radio station broadcast received by the cellular device, or a television station broadcast received by the cellular device.

EX1001, Claims 1, 2, 3

9. A cellular device, comprising:

...

- (i) autonomously providing to a server information associated with a user of the cellular device, **the information taken** by the cellular device **from a message** sent to the cellular device from another user

10. The cellular device of claim 9, wherein **the provided information** additionally includes at least one from the group consisting of a user preference of the cellular device, a user demographic of the cellular device, a user behavior of the cellular device, content played on the cellular device, or a geographic location of the cellular device.

EX1001, Claims 9, 10

12. An article of manufacture comprising:

...

- (a) autonomously providing to a server information associated with a user of a cellular device, **the information taken** by the cellular device **from a message** sent to the cellular device from another user

13. The article of claim 12, wherein **the provided information** additionally includes at least one from the group consisting of a user preference of the cellular device, a user demographic of the cellular device, a user behavior of the cellular device, content played on the cellular device, or a geographic location of the cellular device.

EX1001, Claims 12, 13

Petition relies solely on radio station data

Petition

7. Claim 2

[2.0] The method of claim 1, wherein the provided information additionally includes at least one of the group consisting of a preference of a user of the cellular device, a demographic data of the cellular device, content played on the cellular device, or a geographic location of the cellular device.

As detailed above in the analysis of limitation [1.1.1], Frerichs teaches that information is provided for inclusion in the user profile, and that the information is provided from the cellular phone and may be “derived from the **stations** being selected as well as **use of such stations during the time of day.**” Ex.1004, 15:40-52.

Pet. 53

8. Claim 3

[3.0] The method of claim 2 wherein the provided information additionally includes at least one selected from the group consisting of a game played on the cellular device, a radio station broadcast received by the cellular device, or a television station broadcast received by the cellular device.

As detailed above, Frerichs teaches that the information provided from the cellular device and included within the profile may be “**derived from the stations being selected** as well as use of such stations during the time of day.” Ex.1004,

Pet. 54

Petition

14. Claim 10

[10.0] The cellular device of claim 9, wherein the provided information additionally includes at least one from the group consisting of a user preference of the cellular device, a user demographic of the cellular device, a user behavior of the cellular device, content played on the cellular device, or a geographic location of the cellular device.

See limitation [2.0]. Ex.1003, ¶199.

Pet. 64

17. Claim 13

[13.0] The article of claim 12, wherein the provided information additionally includes at least one from the group consisting of a user preference of the cellular device, a user demographic of the cellular device, a user behavior of the cellular device, content played on the cellular device, or a geographic location of the cellular device.

See limitation [2.0]. Ex.1003, ¶219.

Pet. 69

Radio station data is not taken from a message

Patent Owner's Dr. Malek

1. **Radio station data is not taken from a message (Claims 2, 3, 10, and 13).**

112. Petitioner fails to demonstrate that claims 2, 3, 10, or 13 are invalid.

...

113. The **radio stations** that a user listens to are **not taken from a message** as claim 1 requires. Petitioner does not allege otherwise, and does not even cite anything in Frerichs for the claim limitation “[1.1.2] the information taken by the cellular device from a message” Pet., 38-45.

EX2009, ¶¶ 112-113

Petitioner does not rebut Dr. Malek's testimony

I. **Dependent Claims**

1. **Claims 2, 3, 10, and 13 are Obvious**

See Reply at 24-26

Petitioner's impermissible new argument contradicts the claims: additional information must be from a message

Patent Owner's Dr. Malek

113. The radio stations that a user listens to are not taken from a message as claim 1 requires. Petitioner does not allege otherwise, and does not even cite

EX2009, ¶¶ 112-113

Patent Claims

1. A method for playing content and advertisements on a cellular device, comprising:

(a) autonomously providing to a server, by the cellular device, information associated with a user of the cellular device, the information taken by the cellular device from a message sent to the cellular device from

...

2. The method of claim 1, wherein the provided information additionally includes at least one of the group consisting of a preference of a user of the cellular device, a demographic data of the cellular device, content played on the cellular device, or a geographic location of the cellular device.

EX1001, Claims 1, 2

Petitioner presents a new argument in its reply that claim 2 (only) “additionally includes” information that can be radio station data not taken from a message.

- But the claims expressly require that “the” information is taken from a message.

Petitioner's Reply

While claim 1 requires “*information associated with a user of the cellular device*” be provided, and claim 1’s information is “*taken by the cellular device from a message*,” claim 2 states “*provided information additionally includes*” preferences and other data; thus, the dependent claims’ additionally provided information is not limited to information obtained from a message. That is, in claim 1, “*information*

Reply at 24

Petitioner's impermissible new argument: preferences would be obvious

Petitioner presents a new argument in its reply that taking preferences from messages is obvious.

- But the Petition never made that argument for claims 2, 3, 10, or 13. Petition 42-43 is directed to limitations 1.1.3 and 1.2.

Petitioner's Reply

Even if a “preference” must be in the “message,” the Petition demonstrated obviousness, arguing received emails “would commonly be relevant to...an event of interest (e.g., a concert)” and such emails may contain “the musical style of the concert performer” (Petition, 42-43) (e.g., a musical preference). Thus, even if

Reply at 25

Petition

[1.2] (b) receiving from the server,

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have recognized that, because the user views golf-related e-mail, one identifying characteristic of the user is that she is interested in golf.² Ex 1003, ¶¶125-126.

This would have been consistent with a POSITA's knowledge at the time of the '414 Patent. For example, a POSITA would have recognized that message content, such as e-mail message content, was commonly relevant to or related to the recipient of the message. Ex 1003, ¶127. Thus, for example, the content of any given e-mail message received by a recipient commonly reflects an interest of the recipient. In other words, the content of an e-mail message received from a friend's cellular device would commonly be relevant to a topic of interest (e.g., golf) or an event of interest (e.g., a concert) to the recipient. Likewise, a recipient may receive a forwarded message from a friend's cellular device that originated from a company with advertising content describing products of potential interest to recipients. Consistent with the Frerichs-Kawasaki combination, the content of such received e-mail messages would “identify[] characteristics of the user of the cellular device,” for example, the message identifies that the recipient has an

² The '414 Patent states: “Preference module 602 enables manual entry through a user interface of preferences for a user. The user may enter any information desired to specify likes, dislikes, memberships, affiliations, and the like.” Ex 1001, 9:51-55.

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interest in the musical style of the concert performer, or the message identifies that the recipient has an interest in the products offered by the company in the forwarded message, or the message identifies the recipient's shopping habits. Ex 1003, ¶127.

Because Kawasaki discloses e-mail message content that identifies a characteristic of the user receiving that e-mail content, such as the user has an interest in golf in light of Frerichs' teaching of a cellular phone, Frerichs and Kawasaki therefore render obvious “the message identifying characteristics of the user of the cellular device.” Ex 1003, ¶¶125-128.

[1.2] (b) receiving from the server, by the cellular device, at least one advertisement to be played on the cellular device, wherein the at least one received advertisement is determined by the server based at least in part on the provided information;

The combined teachings of Frerichs and Kawasaki render this limitation obvious. Ex 1003, ¶¶129-134.

Frerichs teaches that the client device (a cellular phone, as detailed above) receives advertisements from an advertisement server, as it discloses that “a specific advertisement can be sent to a specific client.” Ex 1004, 4:44-57, *see also* 1:15-19 (client may be a cellular phone). Frerichs also teaches that the advertisement may be sent “from an advertisement server 114.” *Id.* Thus, Frerichs

43

43

Pet at 42-43

Petitioner's impermissible new argument is wrong: the specification teaches taking demographic data from messages

Petitioner presents a new argument in its reply (for claim 3 only) that the specification does not disclose taking demographic or game data from messages.

- But Dr. Malek testified the opposite is true and provided examples, e.g., demographic data from messages.

Petitioner's Reply

For claim 3, “a game played..., a radio station broadcast..., or a television station broadcast...” are information which the “behavior module 608” is responsible for. The patent does not contemplate providing such information by “other source module 606” acting on a “message sent to the cellular device” nor

Reply at 25

Patent Claims

2. The method of claim 1, wherein the provided information additionally includes at least one of the group consisting of a preference of a user of the cellular device, a demographic data of the cellular device, content played on the cellular device, or a geographic location of the cellular device.

3. The method of claim 2 wherein the provided information additionally includes at least one selected from the group consisting of a game played on the cellular device, a radio station broadcast received by the cellular device, or a television station broadcast received by the cellular device.

EX1001, Claims 2, 3

Patent Owner's Dr. Malek

Q. The specification from column 10, lines 7 to 11, doesn't describe that the demographic module 612 does anything with messages, correct?

MR. ALBERTI: Objection to form.

THE WITNESS: No, I wouldn't agree with that. It doesn't preclude it having -- having -- or dealing with messages. It talks about questionnaires or surveys that could be done through messages.

I wouldn't necessarily agree with that statement.

Agenda

- ▶ The '414 Patent
- ▶ The Applied Art does not Render Obvious the “Information Taken” Limitations
- ▶ The Applied Art does not Render Obvious the “Recording” (Caching) Limitations
- ▶ No Motivation to Combine
- ▶ The Applied Art does not Render Obvious the Dependent Claims
 - ▶ Radio station data is not taken from a message (Claims 2, 3, 10, and 13)
 - ▶ **Petitioner never cited Kawasaki for claims 4 and 11 before its Reply**
 - ▶ Kauffman does not cache at the device that plays content (Claim 7)

Frerichs and Kauffman do not disclose claims 4 and 11; Petition does not cite Kawasaki

Patent Owner's Dr. Malek

2. **The recorded ad is not determined using information taken from a message (Claims 4 and 11).**

114. Petitioner fails to demonstrate that claims 4 or 11 are invalid. Claim 4 requires the cell phone of claim 1 to receive and record “the” determined ad (*i.e.*, the ad that the server in claim 1 determines using information taken from a message) before playing the ad. Dependent claim 11 is similar, and Petitioner simply refers back to its discussion of claim 4. Pet., 64.

115. **Petitioner cites passages from Frerichs** regarding a client with a locally-stored ad, **and passages from Kauffman** regarding caching an ad. Pet., 56-57. **Those ads are not determined using information taken from a message as claim 1 requires, and Petitioner does not allege otherwise.** Pet., 55-57. Indeed, Petitioner **tacitly concedes that Frerichs and Kauffman do not disclose that claimed concept:**

EX2009, ¶¶ 114-115

Petitioner's Reply

Wildseed argues the advertisements referenced in the Petition's analysis of claims 4 and 11 “are not determined using information taken from a message as claim 1 requires” because **neither Frerichs nor Kauffman teach such advertisements.**

Reply at 26

Petition

9. **Claim 4**

[4.0] The method of claim 1, wherein the playing of at least one determined advertisement further comprises: (a) receiving from the server, by the cellular device, the at least one determined advertisement prior to the playing of the at least one determined advertisement; and

As detailed above in the analysis of limitation [1.3.1], the combined teachings of **Frerichs and Kauffman** render obvious “*playing of at least one determined advertisement.*” Ex.1003, ¶¶163.

Pet at 55

15. **Claim 11**

[11.0] The cellular device of claim 9, wherein the playing of at least one determined advertisement further comprises: (a) receiving from the server the at least one determined advertisement prior to the playing of the at least one determined advertisement; and

See limitation [4.0]. Ex.1003, ¶200.

Pet at 64

Agenda

- ▶ The '414 Patent
- ▶ The Applied Art does not Render Obvious the “Information Taken” Limitations
- ▶ The Applied Art does not Render Obvious the “Recording” (Caching) Limitations
- ▶ No Motivation to Combine
- ▶ The Applied Art does not Render Obvious the Dependent Claims
 - ▶ Radio station data is not taken from a message (Claims 2, 3, 10, and 13)
 - ▶ Petitioner never cited Kawasaki for claims 4 and 11 before its Reply
 - ▶ **Kauffman does not cache at the device that plays content (Claim 7)**

Kauffman does not cache at the device that plays content (Claim 7)

Petitioner's reply relies on a supposedly "explicit disclosure" in Kauffman of caching at the end-user device.

- But there is no such disclosure.
- Kauffman's caching is upstream of the end-user's device

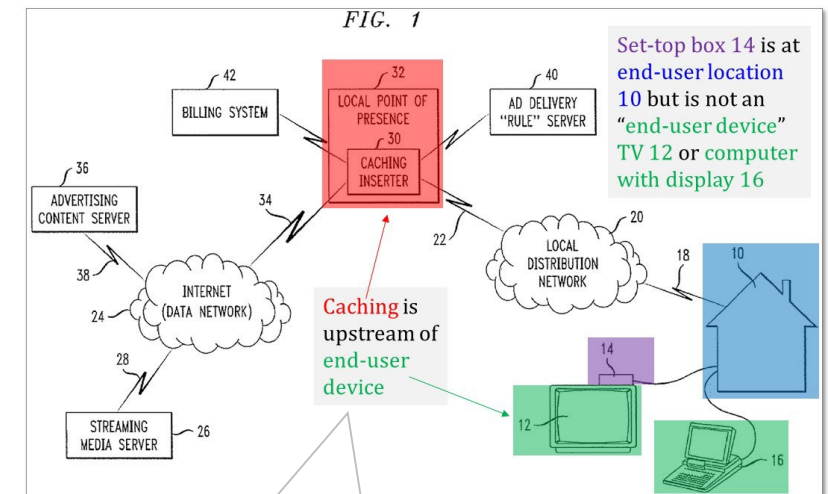
Petitioner's Reply

Wildseed ignores Kauffman's explicit disclosure that the caching inserter may be at the end-user's communication device (i.e., within a cellular device). Given Kauffman's explicit disclosure of advertisement streams received by the caching inserter in the end-user's communication device, Kauffman teaches this claim.

Reply at 26-27

Kauffman has no such disclosure

Patent Owner's Dr. Malek



Caching is
upstream of
end-user
device

EX2009, ¶ 119

Thank You