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PTAB Oral Argument

ResMed Corp. v.

Cleveland Medical Devices, Inc.

March 19, 2026

Case Nos.: IPR2025-00159 and -00160

Patent No.: 11,375,921 and 11,786,680

Kramer Levin is now HSF Kramer

IPR2025-00159 ('921 Patent) – Grounds

Ground	Challenged Claims	35 U.S.C. §	References
I	1-2, 4-5, 7-9, 11-14, and 16	103	Toge, Burton, Kumar
2	1-2, 4-5, 7-9, 11-14, and 16	103	Toge, Burton, Kumar, Kisner

IPR2025-00160 ('680 Patent) – Grounds

Ground	Challenged Claims	35 U.S.C. §	References
I	1-5, 7, 8, 10-13, 15-18, and 20-31	103	Toge, Kumar, Burton
2	10, 15, and 20	103	Toge, Kumar, Burton, and Kisner

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Summary of the Arguments

- Toge in view of Kumar does not render obvious “a remote internet site” (**‘921 and ‘680 Patents**).
- Toge alone or in combination with Kumar does not teach the software limitations (**‘921 Patent**):
 - **Claim 1**: “software [on the cell phone/PDA/base station] is further adopted to retransmit a data related to the subject’s treatment and the treatment efficacy received by the software from the first radio frequency wireless transceiver of the PAP device . . . to the remote internet site.”
 - **Claim 7**: “software [on the cell phone/PDA/base station] is further adapted to receive . . . the data related to the subject’s treatment and the treatment’s efficacy generated by the PAP device that is first received by then retransmitted from the remote internet site.”
 - **Claim 12**: “both the software [on the cell phone/PDA/base station] and the remote internet site independently receive, in whole or part, the data related to the subject’s treatment and the treatment’s efficacy generated by the PAP device.”
- Toge in view of Kumar does not render obvious a patient’s cell phone with downloadable features that receive and display PAP data (**‘680 Patent**).



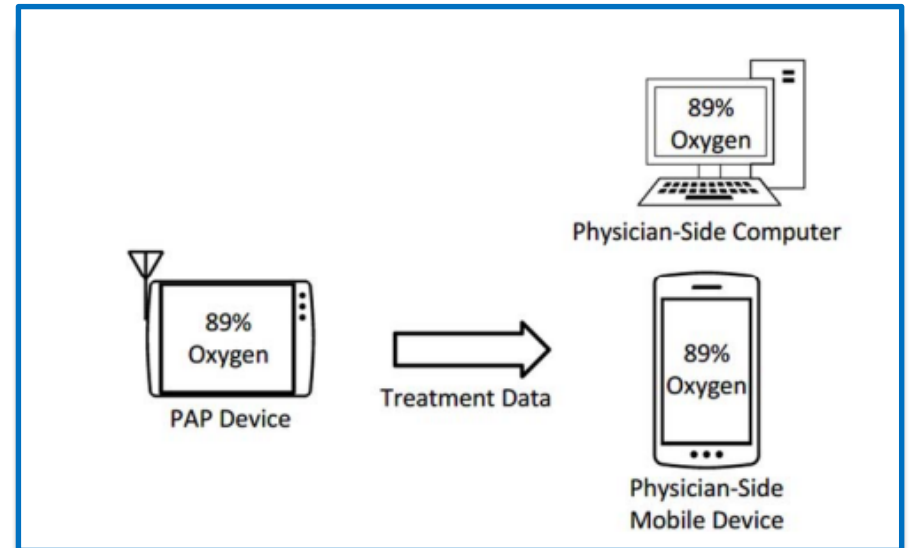
Toge in view of Kumar Does Not Render Obvious a “Remote Internet Site” (‘921 and ‘680 Patents)

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE



Toge Does *Not* Render Obvious a “Remote Internet Site” (’921 Patent)

- Petitioner does not dispute that Toge does not disclose a “remote internet site.” ’921 Reply at 1-3.
- **Petitioner’s obviousness theory fails.** Petitioner’s “well-known” allegation is insufficient because:
 - Petitioner does not show that running a web server on a physician-side computer was “well-known;” and
 - Moreover, this is not sufficient to show that a POSITA would have modified Toge’s physician-side computer with one.
 - *Virtek Vision Int’l ULC v. Assembly Guidance Sys., Inc.*, 97 F.4th 882, 887-88 (Fed. Cir. 2024).



’921 POR at 11

In Toge’s system, treatment data is sent from the PAP device to physician-side devices without a remote internet site (identified as a web server by Petitioner).

’921 POR at 9-12; ’921 Sur-Reply 1-3

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

A POSITA Would *Not* Have Modified Toge's Physician-side Computer with Kumar's Web Server

- Petitioner argues that a POSITA would have been motivated to modify Toge's physician-side computer to operate as both a web server (the alleged "remote internet site") and client device. See '921 Reply at 4-7; see also '921 Pet. at 15.
- **This is incorrect because:**
 - A web server and client on the same machine is "not suitable for a web application" as proposed. '921 Sur-Reply at 5 (citing Ex. 2003 at 4); see also '921 Sur-Reply at 6-7 (citing Ex. 2020 at 4; Ex. 2022 at 3).
 - Separating server and client onto different machines is a fundamental security practice for web applications. '921 POR at 15; '921 Sur-Reply at 8-9.
 - It would have defeated Toge's purpose of pushing data to physicians in emergency situations. '921 POR at 11, 26; '921 Sur-Reply at 10-11.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

A Web Server Implemented on Toge's Physician-side Computer Would *Not* Have Been Suitable for a Web Application

- A web server and client on the same machine is “not suitable for a web application” as proposed. ‘921 Sur-Reply at 5 (citing

Ex. 2003 at 4); see also ‘921 Sur-Reply at 6-7 (citing Ex. 2020 at 4; Ex. 2022 at 3).

It means that the user interface, business, layers are accessible by the application under the same local drive. Both the client and server reside in the same machine. It is the simplest application architecture used. But this tier is not suitable for a web application. As it can only access data available in a single computer or server.

Ex. 2003 at 4 (emphasis added)

2. Servers for Multiple Tiers of Client/Server

In a typical client/server based application, the client process and server process can be on the same computer, or distributed in two or more computers. A single-tier client/server application consists of a single layer that supports the user interface, the business rules, and the data manipulation processes all on one computer. This kind of application is rarely used today because it will not take advantage of the distributed computing environment.

Ex. 2020 at 4 (emphasis added)

However, unlike more advanced systems, it cannot transmit information from one client machine to another.

Ex. 2022 at 3 (emphasis added)

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Because of Security Reasons, a Web Server is Separated from a Client in a Web Application

- Dr. Goodrich stated that because separating server and client onto different machines is a fundamental security practice for web applications, a POSITA would **not** have implemented both web server and client on Toge's physician-side computer. '921 POR at 15; '921 Sur-Reply at 8-9.

vulnerabilities). Because a web server introduces multiple security vulnerabilities, implementing a system as a multiple tier architecture ensures multiple defenses to protect sensitive data from cybersecurity attacks. For example, an attacker who gains a foothold through a client-side application might be able to exploit vulnerabilities in the operating system to gain administrative control over the entire machine. They can then access, modify, or destroy server data. With colocation, a malicious actor who gains access to the local machine has direct access to both the client and server software and data. *See, e.g.*, Ex. 2026. As another example, a failure of the underlying hardware, operating system, or software on that single machine will cause both the client and server applications to fail simultaneously. This results in total downtime for the application and is a major risk for the patient monitoring. *See, e.g.*, Ex. 2027.

PO's Expert

Because of Performance Reasons, a Web Server is Separated from a Client in a Web Application

- Dr. Goodrich stated that a POSITA would **not** have implemented a web server and client on the same machine because multiple services implemented on the same machine would have decreased performance. '921 POR at 16-17; '921 Sur-Reply at 8-9.

[0046]-[0047], [0055]-[0057]. For example, a POSITA would understand that implementing multiple services, such as a web server and the client software on the same machine would create contention for the CPU(s), memory, network bandwidth, and input/output resources on that machine, which would lead to decreased system performance. As shown in a whitepaper discussing “Factors Impacting Scalability,”

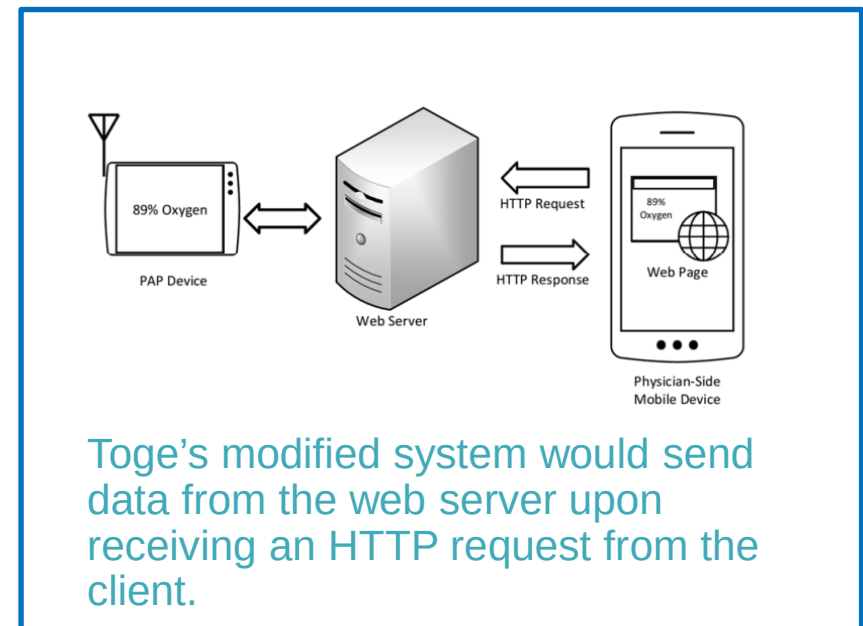
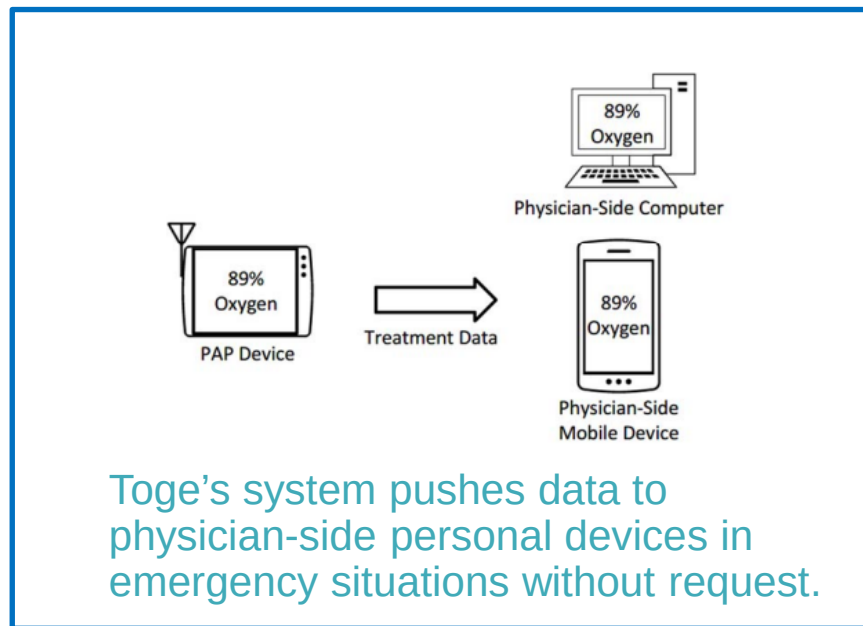
PO's Expert

Ex. 2015, ¶ 49 (emphasis added)

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Implementing a Web Server in Toge Would Have Defeated Toge's Purpose

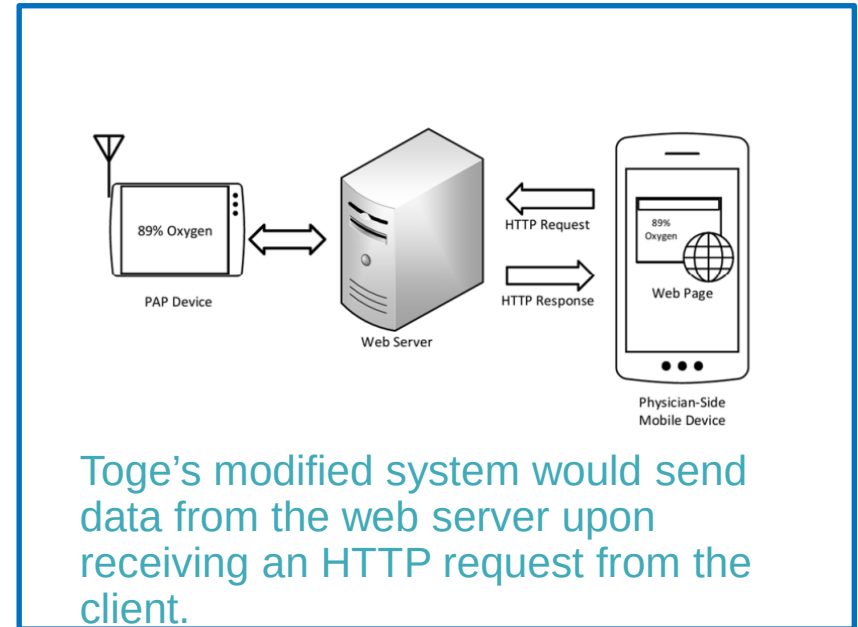
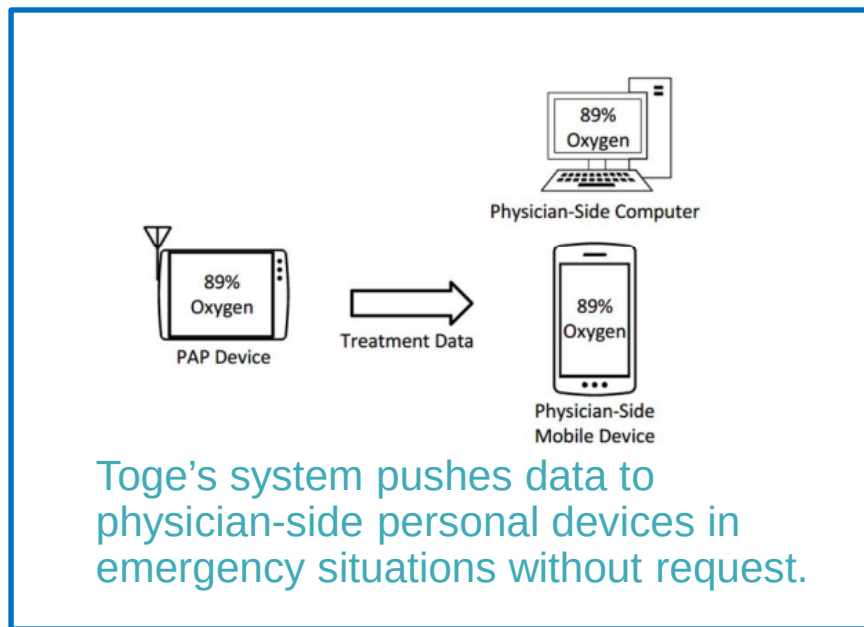
- Because a web server relies on a pull mechanism that requires the physician to request the data, implementing a web server in Toge's system would have defeated Toge's purpose of pushing data to physicians in emergency situations. '921
POR at 11, 26; '921 Sur-Reply at 10-11.



Ex. 2015, ¶¶ 43; 65

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Implementing a Web Server in Toge Would Have Defeated Toge's Purpose



Ex. 2015, ¶¶ 43, 65

PO's Expert

"[T]he web client would need to perform a data pull action rather than receiving a data push from the web server to receive an update." "It would not be until after the priority date of the '921['680] Patent[s] that general web push solutions . . . would be introduced." Ex. 2015, ¶ 57 (emphasis added); see also '921 Sur-Reply at 10-11.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE



Toge Alone or in View of Kumar Does Not Teach the Software Limitations ('921 Patent)



DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Toge Alone or in Combination with Kumar Does Not Teach Claim 1's Software Limitation

Claim 1:



'921 POR at 23-24

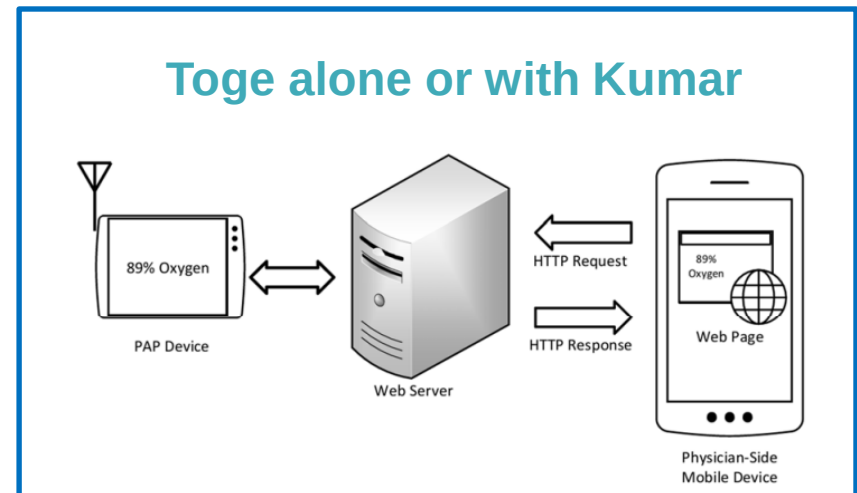
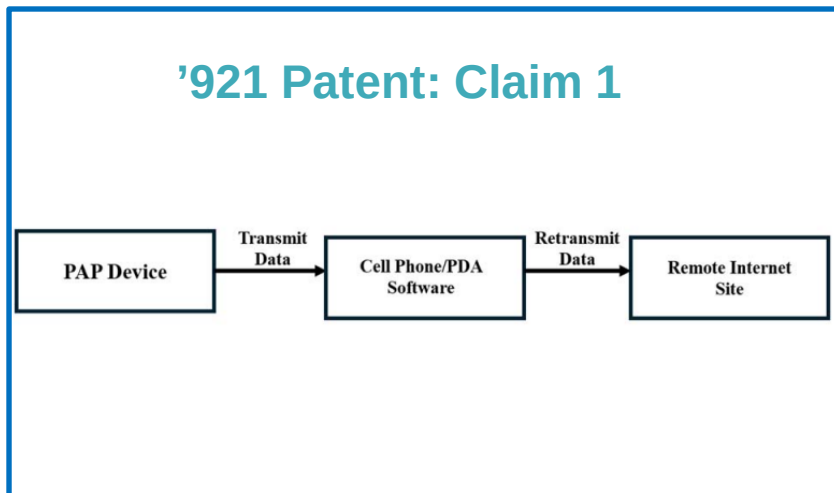
wherein the software is further adapted to retransmit a data related to the subject's treatment and the treatment's efficacy received by the software from the first radio frequency wireless transceiver of the PAP device, in whole or part, to the remote internet site, and

'921 Patent, Claim 1 (emphasis added)

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Toge Alone or in Combination with Kumar Does Not Teach Claim 1's Software Limitation

- Toge alone: Petitioner's obviousness inquiry is based on how Toge's unmodified system transmits data, **not** how it would work if Toge's physician-side computer is implemented as a web server.
- If Toge's physician-side computer is implemented as a web server, the architecture changes to a client device requesting data from a web server. The client device does not receive the data from the PAP and retransmit that data to the remote internet site as in Claim 1.



DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

'921 POR at 23-24 (citing Pet. at 55);
921 Sur-Reply at 16-18

Toge Alone or in Combination with Kumar Does Not Teach Claim 7's Software Limitation

Claim 7:



'921 POR at 31

wherein the software is further adapted to receive, in whole or part, the data related to the subject's treatment and the treatment's efficacy generated by the PAP device that is first received by then retransmitted from the remote internet site, and

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'921 Patent, Claim 7 (emphasis added)

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Claim Construction:

“Retransmit”

CleveMed	Petitioner
plain & Ordinary meaning, <i>which is</i> receiving data and then sending the data to another device.	plain and ordinary meaning.

921 POR at 32; '921 Reply at 17-18

Pet.

“Does not say what that alleged plain and ordinary meaning is, as is its burden under 37 C.F.R. § 42.104(b)(3)-(4).” ‘921 Sur-Reply at 19.

BUT

Pet. Expert

Agreed that when “retransmitting,” a device acts as an “intermediary that “receives and then relays the data to another device.” ‘921 Sur-Reply at 21 (citing Ex. 2018 at 37:17-24).

Toge Alone or in Combination with Kumar Does Not Teach Claim 7's Software Limitation

- Toge's physician-side computer, implemented as a web server, does not retransmit data under the plain and ordinary meaning of that term **because:**
 - Data is stored and only sent to another device in response to an HTTP request.

Pet. Reply

"[T]he Toge-Kumar combination sends data in response to HTTP request." '921 Reply at 21.

Pet. Reply

Although Petitioner argues that "nothing precludes the system from automatically pushing data once it has been received." '921 Reply at 21.
That is false.

PO's Expert

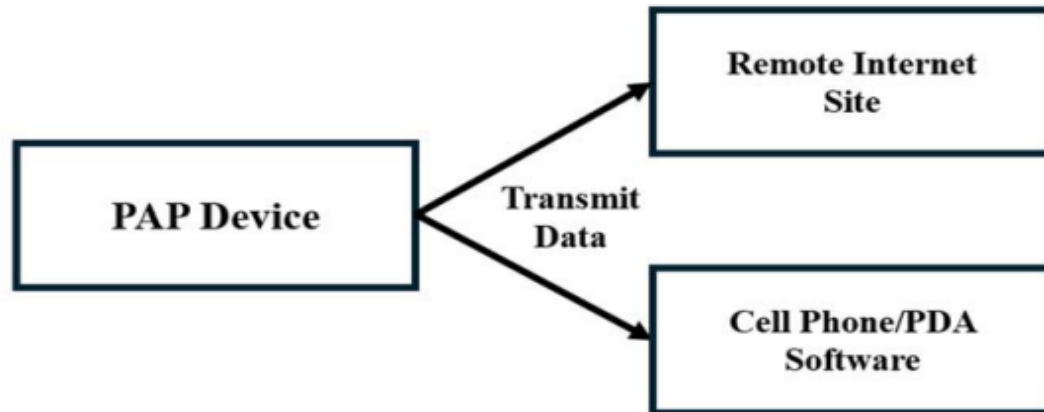
At the time of the claimed invention, "general web push solutions" for a web server were not available. Ex. 2015, ¶ 57, '921 Sur-Reply at 22.

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

'921 POR at 31-32; '921 Sur-Reply at 22-23

Toge Alone or in Combination with Kumar Does Not Teach Claim 12's Software Limitation

Claim 12:



'921 POR at 28

wherein both the software and the remote internet site independently receive, in whole or part, the data related to the subject's treatment and the treatment's efficacy generated by the PAP device, and

'921 Patent, Claim 12
(emphasis added)

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Toge Alone or in Combination with Kumar Does Not Teach Claim 12's Software Limitation

- Toge's modified system does not teach Claim 12's software limitation because in Petitioner's proposed combination the web server manages the transmission through an Internet browser, as no specialized software is needed on the client to access data.

POR

Once Toge's physician-side computer is implemented as a web server, the entire system architecture changes from one where the necessary client devices (i.e., the physician's computer and mobile phone) receive data directly from the PAP device to one where client devices request data from the web server.

'921 POR at 25

Pet.

Id. Additionally, the physician or provider can access the data anywhere using an Internet browser, as opposed to downloading specialized software *Id.*; Chatterjee ¶¶71-72.

'921 Pet. at 5-16

Pet. Expert

information across a distance.” Ex. 1008, ¶ [0003]. Implementing the web pages of Kumar allowed anyone with an Internet-browser to access the data without downloading additional software.

Ex. 1005, ¶ 87

Pet. Expert

resources for multiple doctors and patient is avoided. In particular, if a patient needs multiple specialist, the physicians and providers need not download particular software to access the data. Instead, the physicians and providers can access the data through an Internet browser.

Ex. 1003, ¶ 136

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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'921 POR at 25, 28-29; '921 Sur-Reply 15-16, 23-24

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Toge Alone or in Combination with Kumar Does Not Teach Claim 12's Software Limitation

- Toge's modified system does not teach Claim 12's software limitation because the web server manages the transmission upon a client accessing a web page through the Internet:

PO's Expert

70. In Toge's modified system, there is no independent transfer of data because the now web server—implemented based on Kumar's implementation details—manages the transmission of data upon a client accessing a web page through the Internet. See Chatterjee at ¶ 147 (stating that Toge's physician-side computer would be implemented as a web server “using the implementation detail[s] taught by Kumar”); Kumar at ¶ [0081] (disclosing that “[p]referably, the *engine manages transmission of the data* from the patient-side device to the provider-side device” when the provider-side device accesses a web page) (emphasis added), ¶ [0011] (same), ¶ [0018] (“Preferably, the communications are provided via a browser-based interface.”).



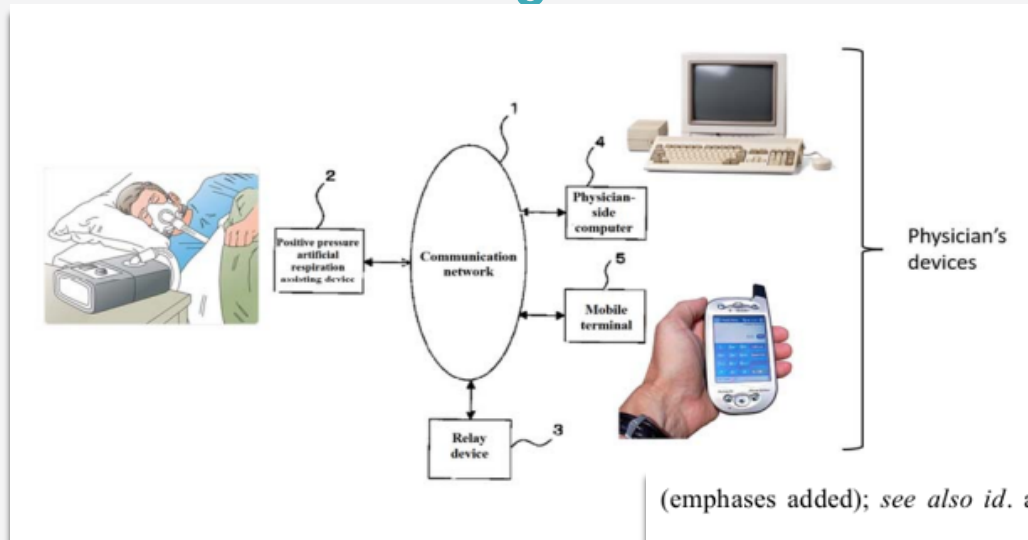
Toge in View of Kumar Does Not Render Obvious a Patient's Cell Phone With the Downloadable Software Features Recited in Independent Claim 1 ('680 Patent)



DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

A POSITA Would *Not* Have Modified Toge's System with a Patient's Cell Phone That Receives and Displays Treatment Data

- Toge's system does *not* disclose a patient's cell phone with downloadable features. Its purpose is directed to physician remote monitoring.



'680 POR at 5 (citing Ex. 2015, ¶ 34)

(emphases added); *see also id.* at ¶ [0039], [0055]. Based on Toge's operating purpose, a medical device developer/network specialist would have recognized that Toge is directed to the physician, not the patient, and it independently operates effectively for that purpose. As such, the device developer would not have had reason to add to Toge's system a patient's cell phone with downloadable software for receiving and displaying data to the patient.

Ex. 2016, ¶ 52; *see also* '680 POR at 20 (citing Ex. 2016, ¶ 52)

A POSITA Would *Not* Have Modified Toge's System with a Patient's Cell Phone That Receives and Displays Treatment Data

Petitioner's alleged motivation is to "allow[] the patient to view the treatment data." However, this would not have motivated a POSITA for at least several reasons as set forth by PO's Expert, Dr. Borkholder:

PO's Expert

53. A medical device developer also would have appreciated that Toge includes a PAP's LCD screen that allows a patient to review their data. I understand that Dr. Kirkness agrees. Kirkness at ¶ 181 (admitting that Toge's PAP device would include a screen). Because the PAP device already allows a patient to review their data, a developer would not have added unwanted cost and complexity to the system by introducing the patient's cell phone for display of the data. This would have been unnecessary.

56. Second, the device developer would recognize that advancements in LCD screens require a minimal footprint on the device and having it increases the likelihood that the device will be used correctly.

57. Third, the device developer/network specialist would recognize the increased regulatory burden of adding a cell phone application into the medical device system. The FDA did not publish their first draft guidance on mobile medical applications (e.g. software on smartphones) until 2011, and this guidance was not finalized until 2013. See Ex. 2037. The device developer would have understood that any software developed for use with the PAP medical device would have been regulated as part of that device. They would have been concerned with the rapidly changing hardware platforms available for smartphones and updates to the operating systems that could impact proper function of the application software. The

58. Fourth, and in addition to the FDA limitations, the device developer/network specialist would have appreciated that in the early 2000s, the majority of cell phones were largely only capable of voice communication and text messaging. At that time, only two percent of American cell phone subscribers even owned a smartphone that could receive and output data via applications downloaded on the device. Ex. 2033 at 2. The remaining cell phone subscribers had simple cell phones used largely "for voice conversations and sending short 'texts.'" Ex. 2034

Ex. 2016, ¶¶ 53, 56-58 (emphasis added); see also '680 POR at 21 (citing Ex. 2016, ¶ 52; '680 Pet. at 33