UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD. AND SAMSUNG ELECTRONICS AMERICA, INC.
Petitioners

v.

MAXELL, LTD.
Patent Owner

Inter Partes Review No.: IPR2024-00907

DECLARATION OF DR. CHARLES D. CREUSERE

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I. INTRODUCTION

I, Charles D. Creusere, declare as follows:

1. My name is Charles D. Creusere. I have been asked by Petitioners Samsung Electronics Co. Ltd. and Samsung Electronics America, Inc. to provide my expert opinions in support of the Petitioners' Response to Patent Owner's Reply for *inter partes* review of claims 1, 4-5, 8-12, and 14-25 ("Challenged Claims") of U.S. Patent No. 10,129,590 ("'590 patent," EX1004), owned by Maxell, Ltd. ("PO"), pursuant to 35 U.S.C. §§311–19 and 37 C.F.R. §42.100..

2. I currently hold the opinions set forth in this declaration.

3. I am being compensated for my time at the rate of $450 per hour. This compensation is not contingent upon my performance, the outcome of this matter, or any issues involved in or related to this matter.

4. I list my background and qualifications in EX1002, ¶¶5-12.

II. DOCUMENTS AND OTHER MATERIALS RELIED UPON

5. In forming the opinions set forth in this declaration, I have reviewed the documents in the following table:

Exhibit No.	Description
1001	Reserved
1002	Declaration of Chuck Creusere
1003	File History of 11,445,241 (17/568,166)
1004	U.S. Pat. No. 10,129,590 (with reexamination certificate)
1005	File History of 10,129,590 (15/208,886)

Exhibit No.	Description
1006	File History of the Reexamination of 10,129,590 (90/014,651)
1007	Declaration of Nathaniel E Frank-White, records request processor at the Internet Archive, attesting authenticity and public availability of EX1010, EX1014, EX1015, EX1018
1008	US 2006/0258289 ("**Dua**")
1009	US 7,149,508 ("**Herle**")
1010	Nokia N93 User Guide ("**N93**")
1011	US 2006/0128332 ("**Rooyen**")
1012	US 2006/0274704 ("**Desai**")
1013	US 2004/0264600 ("**Kao**")
1014	Bluetooth 2.0 + EDR ("**BT-Spec**")
1015	3GPP TS 36.211 V0.2.1 (2006-11) Technical Specification ("**3GPP-Spec**")
1016	Jan 11, 2024, Infringement Contentions for '241 Patent
1017	RM-55 (Nokia N93) SAR Compliance Test Report
1018	News article published on May 15, 2006, on www.mobiletracker.net
1019	WO 00/48373 ("**Rinne**")
1020	US 2005/0280471 ("**Matsushita**")
1021	US 2007/0116292 ("**Kurita**")
1022	Bluetooth Video Distribution Profile ("**VDP**")
1023	US 2007/0275704 ("**Terai**")
1024	March 7, 2024, Infringement Contentions for the '590 Patent
1025	Plaintiff Maxell, Ltd.'s Opening Claim Construction Brief in 5:23-cv-00092-RWS (without exhibits)
1026	Defendants' Responsive Claim Construction Brief in 5:23-cv-00092-RWS (without exhibits)
1027	Plaintiff Maxell, Ltd.'s Reply Claim Construction Brief in 5:23-cv-00092-RWS (without exhibits)
1028	Plaintiff's Claim Construction Presentation in 5:23-cv-00092-RWS
1029	Defendants' Claim Construction Presentation in 5:23-cv-00092-RWS
1030	Claim Construction Hearing Transcript in 5:23-cv-00092-RWS
1031	Court's Preliminary Claim Constructions in 5:23-cv-00092-RWS
1032	Jan. 10, 2025 Declaration of Tanya Zeif
1033	Jan. 22, 2025 Declaration of Tanya Zeif

Exhibit No.	Description
1034	Jan. 27, 2025 Declaration of Roshan Bhattarai
1035	Sept. 24, 2024 email from Bhattarai to Patron Services Peach (Affidavits)
1036	Sept. 25, 2024 email from Patron Services (Affidavits) to Bhattarai
1037	Oct. 20, 2024 email from The Internet Archive Team to Bhattarai
1038	Oct. 20, 2024 news article at National Public Radio (NPR) website
1039	Oct. 22, 2024 email from Bhattarai to Affidavits
1040	Nov. 6, 2024 email from Bhattarai to Patron Services Peach (Affidavits)
1041	Nov. 19, 2024 email from Bhattarai to Patron Services Peach (Affidavits)
1042	Dec. 13, 2024 email from Bhattarai to Patron Services Peach (Affidavits)
1043	Dec. 23, 2024 email from Bhattarai to info@archive.org
1044	Dec. 23, 2024 email from Bhattarai to Internet Archive
1045	Dec. 23, 2024 email from Bhattarai to Paron Services Peach (Affidavits)
1046	Dec. 27, 2024 email from Patron Services Blue (Affidavits) to Bhattarai
1047	Jan. 7, 2025 email from Bhattarai to Patron Services Peach (Affidavits)
1048	Jan. 7, 2025 email from Patron Services Blue (Internet Archive) to Bhattarai
1049	Jan. 10, 2025 email from Patron Services Blue (Internet Archive) to Bhattarai
1050	Jan. 17, 2025 email from Bhattarai to Affidavits
1051	Jan. 23, 2025 email from Patron Services Blue (Affidavits) to Bhattarai
1052	Reserved
1053	Reserved
1054	Reserved
1055	Reserved
1056	Reserved
1057	Deposition Transcript of Mr. McNair
1058	Declaration of Dr. Creusere
1059	Archived Page of http://www.3gpp.org/specs/numbering.htm.

Exhibit No.	Description
1060	Archived Page of http://www.3gpp.org/ftp/Specs/html-info/36-series.htm
1061	Archived Page of http://www.3gpp.org/ftp/Specs/html-info/36211.htm
1062	Archived Page of http://www.3gpp.org/ftp/Specs/archive/36_series/36.211/36211-021.zip
1063	Archived Page of Nokia Software Updater from Symbian Freak
1064	US 2006/0075284 (**"Skan"**)
1065	Samsung joins Symbian Mobile Group-The New York Times
1066	Symbian CEO Disses Linux-Based Android, Tells Google to Bring It-WIRED
1067	Smartphone Operating System Market Share Visualization
1068	Mobile industry backs Symbian for mobile OS leadership
1069	Samsung Unveils the Symbian OS Smartphone SGH-i400
1070	Samsung shows Symbian satnav smartphones: The Register
1071	N93 Wikipedia page (October 12, 2007)
1072	N93 Wikipedia page (August 18, 2007)
1073	Scheiter, C. et al., (2003) A System for QoS-Enabled MPEG-4 Videa Transmission Over Bluetooth For Mobile Applications, Multimedia and Exp, 2003 ICME '03, Proceedings, Washington DC, pp. 789-792
1074	Razavi, et al., (2006) Efficient Packetization for Bluetooth Video Transmission, Electronic Letters, Vol. 42, No. 20, pp. 1143-1145
1075	U.S. Pat. No. 8,514,832

6. Additionally, I have utilized my own experience and expertise, including regarding the knowledge and capabilities of a person of ordinary skill in the relevant art in the timeframe of the claimed priority date of the'590 patent.

III. POSITA

7. I have reviewed the PO's definition of a POSITA and noted the slight differences with my definition of the POSITA. POR, 3; EX1002, ¶ 28. My opinions do not change under the PO's definition of the POSITA.

IV. PUBLICATIONS

A. N93

8. A POSITA could easily find N93 from the Wikipedia page of the N93 phone. An interested person in the N93 would have searched for publicly available information and would have easily found the N93 Wikipedia page which is a very well known source of information. On reading that page, an interested person would have been able to see and access the N93 URL by clicking on the link to the N93 Manual. I verified this by two methods.

9. In the first method, I used the archived Wikipedia page of the N93 phone. Specifically, the N93 Wikipedia page archived on October 15, 2007 included an "External links" section with the N93 URL (http://nds1.nokia.com/phones/files/guides/Nokia_N93-1_UG_en.pdf) as "Online copy of the N93 Manual (PDF)". *Id.*; EX1033, 4-6; EX1007, 2, 9-139; EX1034 (Bhattarai Decl.), ¶2.

10. In the second method, I used the historical versions of the Wikipedia page of the N93 phone. The same N93 URL is hyperlinked on the "Online copy of

the N93 Manual (PDF)" in two different historical versions. EX1071, 1 (October 12, 2007 version), 3 (N93 URL); EX1072, 1 (August 18, 2007 version), 3 (N93 URL).

B. BT-SPEC

11. I verified that BT-Spec was publicly available at the Bluetooth technology website. An interested person would have gone to the Bluetooth website to learn details about Bluetooth. Once on the website, an interested person would have proceeded as follows:

(1) At the homepage http://www.bluetooth.com/bluetooth/ (EX1033, 19-20), I clicked on "Learn" on the top left panel to navigate to http://www.bluetooth.com/Bluetooth/Learn/. *Id.*, 21-22.

(2) I clicked on "Bluetooth Technology" on the top left panel to navigate to http://www.bluetooth.com/Bluetooth/Learn/Technology/. *Id.*, 23-24.

(3) I clicked on "Specification Documents" to navigate to http://www.bluetooth.com/Bluetooth/Learn/Technology/Specifications/. *Id.*, 25-26.

(4) I clicked on "Core Specification v2.0+EDR" to download BT-Spec. *Id.*, 27; EX1007, 2, 194-1423

C. 3GPP-SPEC

12. I verified that 3GPP-Spec was publicly available and easily locatable by an interested person at the 3GPP website (https://www.3gpp.org). An interested person would have gone to the 3GPP website to learn details about the latest specifications of the 3GPP standards. The website is the authoritative source of all the 3G standards.

13. Once on the website, an interested person or POSITA would follow the below sequence. I followed this sequence in the archived version of the listed webpages to download 3GPP-Spec.

(1) At the homepage https://www.3gpp.org/ (EX1033, 7-8), I clicked on "Specifications" to navigate to http:/www.3gpp.org/specs/specs.htm. *Id.*, 9-13.

(2) I clicked on "specifications file server area" to navigate to http://www.3gpp.org/ftp/Specs/. *Id.*,14-15.

(3) I clicked on "Latest-drafts" to navigate to http://www.3gpp.org/ftp/Specs/Latest-drafts/. *Id.*,16-18.

(4) I clicked on December 5, 2006 version of "36211-021.zip" to download the zip file at http://www.3gpp.org/ftp/specs/latest-drafts/36211-021.zip with clean and redlines version of the 3GPP-Spec. EX1007, 2, 141-164 (clean), 165-192 (redlines). As shown in the web pages, there are a

limited number of latest specifications and an interested person and POSITA would have been familiar with how to flip through the specifications if they did not already know the relevant number.

14. A POSITA or interested person that were less familiar with the 3GPP website could also follow the alternate sequence below. I followed this sequence on the archived version of the listed webpages to download the 3GPP-Spec.

(1) At the homepage https://www.3gpp.org/ (EX1033,7-8), I clicked on "Specifications" to navigate to http:/www.3gpp.org/specs/specs.htm. *Id.*, 9-13.

(2) I clicked on "To find a particular spec quickly, go here…." to navigate to http://www.3gpp.org/specs/numbering.htm. EX1059 Note that this option labelled for members of the public that are not familiar, like a POSITA would have been, with 3GPP in general.

(3) I clicked on "36 series" under "Evolved UTRA aspects" to navigate to http://www.3gpp.org/ftp/Specs/html-info/36-series.htm. EX1060.

(4) I clicked on "TS 36.211" for " Evolved Universal Terrestrial Radio Access (E-UTRA); Physical Channels and Modulation" to navigate to http://www.3gpp.org/ftp/Specs/html-info/36211.htm. EX1061.

(5) I clicked on the version "0.2.1" to download the zip file at http://www.3gpp.org/ftp/Specs/archive/36_series/36.211/36211-021.zip with clean and redlines version of the 3GPP-Spec. EX1062.

(6) I confirmed the clean versions of 3GPP-Spec EX1062 and EX1015 are the same.

V. OPINIONS

A. Dua teaches Bluetooth 2.0+EDR and all Profiles.

15. It is my opinion that Dua teaches Bluetooth 2.0+EDR and all profiles, including the Video Distribution Profile. Dua teaches the radio should implement "Bluetooth" and "support the widest array of communication protocols and broadcast standards." EX1008, [0062]-[0063]. Dua was published in November 2006 and the prevailing Bluetooth standard at the time was Bluetooth 2.0+EDR. EX1014 (BT-Spec), 1 (4 November 2004). A POSITA would therefore implement the prevailing Bluetooth standard based on the teachings of Dua. And as Mr. McNair acknowledges, Bluetooth at the time included a Video Distribution Profile. Dua's expansive teaching to support the widest array of protocols would have included Bluetooth's Video Distribution Profile. This is particularly true for Bluetooth video streaming applications, which a POSITA would have known would benefit from the additional bandwidth. For example, EX1073 explains that, without EDR, highly efficient MPEG-4 compression is desired for video streaming

over Bluetooth. EX1074 explains that, with EDR, the less efficient MPEG-2 compression could be used for video streaming over Bluetooth. Dua teaches both compression schemes. EX1008, Fig. 7.

B. Dua is enabling for the claimed features.

16. The PO and Mr. McNair contends that Dua is not enabling for several features. I disagree. In my opinion, Dua enables all the features I discussed in my initial declaration EX1002. I note that for the most part, Mr. McNair does not cite any evidence to back up his opinions, because they are not correct.

17. Mr. McNair asserts that N93 is non-enabling of certain limitations (paragraphs 160-164), but the combination of N93 and Dua enables those limitations.

18. Dua discloses and enables a CPU that controls all its radio communication circuits. EX1008, Fig. 1 (CPU 109, network transceiver 105, short range transceiver 108). Dua implements a well-known architecture where a CPU is designed to control the overall system. That is, Dua's CPU 109 is designed to control the phone 100, including controlling the assignment of the transceivers 105 and 108. A simple use case of such assignment is for the CPU 109 to receive and interpret a user's manual assignment of a radio communication circuit or any other I/O interface circuit. Additionally, Dua does not show a dedicated radio controller,

and therefore the CPU has to control all the different types of radios, such as the ones shown in Fig. 7.

19. Mr. McNair is incorrect in his assertion starting at paragraph 165 of his declaration that Dua is non-enabling. In paragraph 165, Mr. McNair first appears to be contending that Dua is non-enabling because it is not a specific piece of hardware. The creation of a hardware device is most definitely not a requirement for enablement; Dua is a patent application and its description of a cellphone-like wireless media device fully satisfies the enablement requirement to a POSITA. Based on that description, a POSITA would have been fully able to create a device that implemented Dua.

20. I disagree with Mr. McNair's opinion in paragraph 166 that Dua is not enabled. Dua provides more, not less detail on its radio architecture than the patent at issue. Dua describes repeatedly how the CPU will control simultaneous communications of its radio communication circuits. The guidance provided by Dua is more than adequate in providing sufficient guidance to enable a POSITA in the 2007 timeframe to implement the claimed invention. Dua's disclosure is more enabling than the patent at issue because, for example, it discloses industry standard radios. The patent at issue provides much less detail on how to implement its radios. Mr. McNair relies on a single passage in the '590 patent that relates to changing the modulation scheme of two radios to adjust their bandwidth, but he

does not explain how that isolated statement enables the overall process of simultaneous transmission, which is described in much more detail in Dua, which also leverages the knowledge of a POSITA regarding the industry standard radios.

21. I disagree with Mr. McNair's opinion in paragraph 130 and 167 that I have admitted that Dua is non-enabling because it does not disclose "lower-level implementation details." I was clearly referring to whether Dua's radios were implemented as combined or discrete radios. Mr. McNair appears to lack the understanding that the prior art must be interpreted in view of a POSITA in November 2007 and that this POSITA has the entire knowledge base of their field available to them. Clearly, as evidenced at least in part but other prior art cited (e.g., Rooyen, Desai and Kao), a POSITA in 2007 would have been able to implement the radio communication circuits as combined or discrete circuits.

22. In paragraph 168, Mr. McNair's main contention appears to be that Dua is non-enabling because most cellphones at the time that had WiFi capability only implemented 2.4GHz WiFi and not 5GHz WiFi. This argument is completely flawed in that a POSITA would have, again, understood that WiFi technology could operate at both frequencies and thus that they could choose to implement one or both bands at their discretion using Wi-Fi a/b/g/n. The resource constraints like expense, power, and other issues are known implementation details and tradeoffs, and are all obvious to a POSITA at a technical level. Mr. McNair appears to

repeatedly confuse this technical inquiry with whether manufactures consider the time is right economically to launch a feature.

23. Mr. McNair's contention that Dua is not enabling in paragraph 169 is essentially the same as the one he made in Paragraph 167: not enough implementation details. It is thus similarly deficient for the same reasons as I noted above.

24. In paragraph 170, Mr. McNair contends that Dua is not enabling because it only directly cites the 3G cellular standard and not the older 2G standards. But Dua explicitly calls out GSM as well, which is a 2G standard. EX1008, [0066]. And a POSITA familiar with the 3G standards would also be familiar with the relevant 2G standards and would find it obvious to use a combined 2G/3G cellular modem, given that many parts of the country still only had 2G cellular service in 2007. A POSITA would have found it obvious to build a device that could operate over the widest range of cellular networks possible, consistent with Dua's teachings. I also note that Rooyen, N93 and Kao explicitly teach including 2G and 3G radios, which would have required a controller to choose between them, like Dua's CPU.

25. Mr. McNair continues this basic argument of non-enablement in Paragraph 171 where he confuses the CPU assigning a 2G and 3G radio with switching between 2G and 3G networks. Mr. McNair notes that Dua does not

explicitly disclose a separate modem to control the radios, which is true. Dua discloses a CPU to control the radios, which confirms Mr. McNair's opinions regarding a "modem" are not relevant. What is claimed is a controller assigning a radio based on a user indication of a radio, and there is no question that Dua discloses and enables that functionality.

26. McNair again contends in Paragraph 172 that Dua does not disclose implementation details for managing and controlling access to the 2G and 3G network. I disagree. Dua teaches a CPU assigning radios. And 2G and 3G radios are just types of radios. This is a particularly basic I/O functionality performed by CPUs, wherein a CPU has to decide which I/O interface should handle which I/O operation. The CPU will consider inputs from a user and then assign the indicated I/O interface, in this case, a radio (2G/3G/Bluetooth/Wi-Fi, etc.). Moreover, a POSITA in 2007 would have found the management and control of 2G and 3G connections to have been obvious given the existence of millions of devices that were doing that already.

C. Disclosure and Enablement of Video Streaming over Bluetooth and UMTS

27. I disagree with Mr. McNair's opinion that Dua fails to disclose or enable steaming over Bluetooth as he states in, e.g., paragraph 263. Dua discloses that the media player will use the radios in Figure 7 (including Bluetooth) and

provide the data (including MPEG2 or MPEG4) to the receiving device and does not "exclude" any combination of radio and data type as Mr. McNair incorrectly opines.

28. I also disagree regarding Mr. McNair's opinions regarding streaming video over Bluetooth in general. E.g., paragraphs 264-267. It was well known to stream video over Bluetooth as I discussed in EX1002 with regard to the intrinsic record and Tee. Additionally, EX2010, EX1074, and EX1075 show it was known long before November 2007 to stream video over Bluetooth, with or without EDR. Individuals in the art are always trying to improve the quality of wireless streaming of video over various wireless interfaces, including Bluetooth. But it was well known that video could be streamed over Bluetooth prior to November 2007 and implementing such streaming was well within the skill of a POSITA and would not require undue experimentation.

29. I disagree with Mr. McNair's opinion that a POSITA would use WiFi instead of Bluetooth. As Dua explicitly teaches, a POSITA should support both in order to support the requirements of the target device.

30. I disagree with Mr. McNair's opinion that cellphones would not handle Bluetooth and UMTS/GPRS simultaneously. See, e.g., paragraphs 269-271. In fact, N93 explicitly discloses using Bluetooth during a phone call, which is simultaneous. And even if the Bluetooth and UMTS transmission packets were

interleaved as Mr. McNair posits, which they would not be since they use different frequency bands, the overall transmission processes would still be simultaneous as claimed: the data in both communications channels would flow in real time to their respective receivers. Mr. McNair fails to cite any evidence for his opinion, and I note that Dua discloses "simultaneous" and, as I discussed in EX1002, the intrinsic record confirms such simultaneous connections in cellphones (e.g., Tee, Dua, N93) was "well known."

31. In Paragraphs 244 and 271, Mr. McNair contends without support that Bluetooth and UMTS/GPRS operate in "adjacent" frequency bands and that this is a major issue which could cause performance degradations. Mr. McNair's contention is incorrect. The frequency bands are not adjacent. Mr. McNair appears to be contending that the 2100MHz (i.e., 2.1 GHz) upper band of UMTS/GPRS is adjacent to the 2.4 GHz band used by Bluetooth. But there is an over 200MHz gap between the highest UMTS/GPRS band and the lowest Bluetooth band. To put the size of this gap into perspective, the maximum typical size of a UTMS channel is 20MHz, so that gap could contain over 10 individual UTMS channels, each co-existing with each other. Furthermore, Mr. McNair's contention that "sophisticated RF filtering" would be required is also completely off-base: the filtering required could not possibly be any more sophisticated than the filtering that is already part of the UMTS/GPRS family of standards because that filtering must be capable of

separating analog channels that are considerably closer together, being spaced at most 20MHz apart. Furthermore, UMTS/GPRS must be filtered to prevent interference from the neighboring 1900 GSM band, which is much closer than the Bluetooth band. Notably, the patent at issue in Figure 11 shows 4 radio bands truly adjacent to each other, and does not mention any special filtering, confirming Mr. McNair's comment is incorrect.

32. I disagree with Mr. McNair's opinion that the combination is not enabled. *See, e.g.,* 272. Mr. McNair simply does not address the evidence in Dua and the art, including the intrinsic record, that such simultaneous communication were "well known."

D. My deposition testimony confirms that CPU/controller assigns radios.

33. PO and Mr. McNair discuss my deposition testimony regarding the assignment of radios. POR, 22; EX2017, ¶225. My testimony confirms that the claims just require a CPU to assign the radios. There could be multiple steps involved in the assignment process, but the CPU has to make to the assignment, regardless of the number of steps, or the user's indication will never make it to the radio and the radio will not perform the requested function. As I have discussed, both Dua and N93 disclose a CPU assigning a radio based on a user indication, as required by the claims. EX1002, ¶¶112-121. A POSITA would find the "manual"

process of assigning radios disclosed by Dua to be very simply, especially relative to the automated RFID-based process at the core of Dua's main innovation. Specifically, the POSITA would simply program a software "switch" into the user interface which would allow the use to select which radio should be assigned by the CPU for which task. Given the skill set of our POSITA, no additional direction would be required, so the "manual" radio assignment process would certainly be enabled.

E. Time Division Multiplexing facilitates simultaneous communications

34. Simultaneous communication processes like transmitting videos and connecting to a network that are interleaved using time division multiplexing (TDM) are still considered simultaneous processes under the ordinary meaning of simultaneous in the art. For example, EX1075 discloses using time division multiple-access for simultaneous communication. EX1075, 1:38-42. And EX1012, [0051] discloses using TDM is still considered "simultaneous." Simultaneous communications do not require an exact instant in time when two individual packets of the overall process are emitted by a radio. The claimed processes consist of many, many packets separated over time, such that the packets from two simultaneous communication streams may be interleaved and the processes still be considered simultaneous.

F. Mr. McNair's testimony regarding the combination of N93, Herle, and Dua is not correct

35. N93 used Symbian OS, which was the most popular mobile operating system in 2007. EX1067, 1-2 (Symbian OS in more than 50% of smartphones sold). Samsung owned 4.5%-5% of Symbian in that time frame. EX1065, 1 (Samsung taking 5% ownership of Symbian); EX1068, 4 (Samsung's 4.5% ownership of Symbian). Samsung's mobile phones ran Symbian OS. EX1069, 1 (Samsung's 2007 Symbian OS phone SGH-i400); EX1070, 1-2 (Samsung's 2007 Symbian OS phones SGH-i550 and SGH-i560). Nokia owned more than 47% of Symbian in that time frame. EX1068, 4 (Nokia's 47.9% ownership of Symbian); EX1066, 1 (Nokia's 47% ownership of Symbian). Mr. McNair's testimony that Herle (a Samsung patent application) would not apply to a company like Nokia that shipped Symbian-based phones to large numbers of customers, applies equally to Samsung (Herle) who is in the same position. Thus, Mr. McNair is opining that Herle's OTA update process would not have been obvious to use in Herle's employer's phones. Notably, Skan (EX1064) explicitly teaches OTA updates to the Symbian operating system in a cellular phone.

36. I have reviewed the '509 patent specification. The disclosure for OS update is minimal and mentioned in only two sentences. There is no discussion of the supposed complications raised by Mr. McNair or how to overcome them. In

contrast, Herle addresses the issues Mr. McNair raises with respect to memory, bandwidth, efficiency, security, stability, etc., associated with the update process. EX1009, 1:61-2:28, 2:57-3:4. Over the air updates were a known solution in the art in 2007 as exemplified by Herle (EX1009) and Skan (EX1064). The fact that reference like Herle and Skan had already disclosed sufficient detail to a POSITA to enable OTA updates to an operating system is what allows the patent at issue to casually mention this known solution.

G. GSM refers to all 2G technology and UMTS refers to all 3G technology.

37. It is my opinion that GSM refers to all 2G technology, including EDGE. It is also my opinion that UMTS refers to all the 3G technology, including HSPA and Evolved UTRAN (3GPP-Spec). Dua teaches a POSITA to include all such 3GPP standards, not a subset. EX1008, [0069]. Dua's teaching is also forward looking, as Mr. McNair acknowledges, by identifying draft standards like 802.11n. The industry does launch products based on draft standards. For example, the Wi-Fi Alliance certified and companies launched 802.11n products in 2007, even though 802.11n was not finalized until 2009.

H. Kao and Rooyen

38. Neither Kao nor Rooyen have a baseband circuit that chooses between and assigns one of the distinct 2G and 3G radios in response to a user indication.

Therefore, in the context of the combination, the radios will have to be controlled by an external controller, and the only such external controller in the combination is Dua's CPU, which is already disclosed by Dua as controlling assignment of radios.

I. Dua and NFC

39. I disagree with Mr. McNair's opinion that Dua does not enable an NFC radio in a cellular phone. NFC was just one of another standard radio circuit as explained by Dua. It was not "forward looking" as the standard predated Dua. Mr. McNair again confuses when NFC became commercially popular with when it was obvious to a POSITA.

J. HSDPA and OFDM

40. I disagree with Mr. McNair's opinion in his declaration that HSDPA and OFDM were not enabled. I agree with Mr. McNair's testimony at his deposition that these were known technologies and a POSITA would have known how to implement them.

VI. CONCLUSION

41. I hereby declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct, and that all statements made of my own knowledge are true and that all statements made on information and belief are believed to be true. I understand that willful false statements are

punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code.

6/25/2025
Date

Dr. Charles D. Creusere