IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

M2M SOLUTIONS LLC, Plaintiff, v. SIERRA WIRELESS AMERICA, INC. and SIERRA WIRELESS, INC., Defendants.	**C.A. No. 12-030-RGA** **CONFIDENTIAL – FILED UNDER SEAL**
M2M SOLUTIONS LLC, Plaintiff, v. ENFORA, INC., NOVATEL WIRELESS SOLUTIONS, INC., and NOVATEL WIRELESS, INC., Defendants.	**C.A. No. 12-032-RGA**
M2M SOLUTIONS LLC, Plaintiff, v. MOTOROLA SOLUTIONS, INC., TELIT COMMUNICATIONS PLC, and TELIT WIRELESS SOLUTIONS INC., Defendants.	**C.A. No. 12-033-RGA**

DECLARATION OF DR. RAY W. NETTLETON IN SUPPORT OF PLAINTIFF'S ANSWER TO DEFENDANTS' MOTION FOR RECONSIDERATION OF THE COURT'S CLAIM CONSTRUCTIONS OF "PROCESSING MODULE" AND "PROGRAMMABLE INTERFACE"

I, DR. RAY W. NETTLETON, state and declare as follows:

1. I am a testifying expert witness retained to provide expert opinions on behalf of the named Plaintiff M2M Solutions LLC ("M2M") in the above-referenced actions. I submit this Declaration in support of M2M's Answer To Defendants' Motion For Reconsideration Of The Court's Claim Constructions Of "Processing Module" And "Programmable Interface" Based On The Federal Circuit *En Banc* Decision In *Williamson V. Citrix Online* that was jointly filed by the named Defendants in the above-referenced actions on July 10, 2015. I have personal knowledge of all of the facts stated herein and, if sworn as a witness, I could and would testify competently thereto.

MY BACKGROUND AND QUALIFICATIONS

2. I was awarded a Ph.D. in Electrical Engineering from Purdue University in 1978, and a Master's of Science in Electrical Engineering, also from Purdue University, in 1976.

3. I also hold a Bachelor of Technology degree, *magna cum laude*, from the University of Dayton, which was awarded in 1974.

4. My Ph.D. research focused on technology for wireless telecommunications. My doctoral thesis topic was entitled "Spectral Efficiency in Land-Mobile Communications: A Spread Spectrum Approach." It was a seminal work of relevance to the later adoption and use of CDMA technology in 3G wireless networks.

5. The primary focus throughout my career has been wireless telecommunications networks, and devices and circuits for use in those networks.

6. As an Associate Professor at the University of Colorado, Boulder, and in other institutions, I have taught graduate-level courses in wireless local area networks, public networks, satellite, and other wireless communications technologies. I remain on the adjunct faculty of the University of Colorado.

7. Presently, I am an independent telecommunications consultant with a specialty in wireless communications. I have been in the wireless telecommunications field for 35 years and have been a consultant for an aggregate of 16 years.

8. A true and correct copy of my *curriculum vitae* is attached hereto as Exhibit 1, which includes all the publications I have authored in the previous 10 years, among others.

APPLICABLE DEFINITION OF A POSITA

9. I have been informed by M2M's counsel that M2M has previously advanced the following definition of a person of ordinary skill in the art (hereinafter, a "POSITA") relative to U.S. Patent No. 8,094,010 (the "'010 patent") asserted in these cases: "the level of ordinary skill in the art would be met by a person with a bachelor's degree in computer science or electrical engineering with at least two years of software programming experience and at least two years of industry experience working with wireless communications networks and/or Wide Area Networks ("WANs")." I agree with this definition and have applied it in formulating my opinions below relating to the "processing module" and "programmable interface" claim terms.

DISCLOSURES OF ALGORITHMIC STRUCTURE EXPLAINING HOW THE "PROCESSING MODULE" PERFORMS ITS AUTHENTICATING FUNCTION

10. As recited in the "processing module" limitation that appears in independent Claims 1 and 52 of the '010 patent, the function of the "processing module" is *authenticating* a received incoming transmission. *See* ('010 patent at 12:27-37; 15:61-16:4). The surrounding claim language in the "processing module" limitation expressly explains how this authenticating function is to be performed. (*Id.*). Indeed, the claim language states that the particular manner by which the "processing module" can carry out authenticating is "by determining if the at least one transmission contains the coded number." (*Id.*).[1]

[1] The specification for the '010 patent confirms that this is the particular manner in which the "processing module" is capable of performing its authenticating function. *See, e.g.*, ('010 patent at Figs. 2 & 3; 4:35-40).

11. When the "by determining" claim language phrase quoted above is read in view of the more detailed and particularized teachings of the '010 patent specification, a POSITA would understand that it teaches that the "processing module" can perform its authenticating function by determining whether the received incoming transmission contains a required coded number through comparing a coded number stored locally in memory with the coded number from the transmission to verify whether they match. *See* ('010 patent at 9:15-10:22). Indeed, the preferred embodiment of the claimed "programmable communicator" is described as comprising a SIM card which stores a PUK code in memory. (*Id.* at 9:24-34). As the specification explains, the "PUK code is a unique identifier" coded number "which is different for every SIM card." (*Id.*). When incoming SMS message transmissions are received that include certain programming instructions, these transmissions will be authenticated if they are confirmed to contain a PUK code that matches the PUK code stored locally on the receiving "programmable communicator" device. (*Id.* at 9:15-10:22). To wit, the "programmable communicator includes a processing means to determine that the PUK code is correct" as contained in the received incoming SMS transmissions. (*Id.* at 9:41-42).

12. Similarly, when this "by determining" claim language phrase is read in view of the prosecution history, a POSITA would likewise understand that it teaches that the "processing module" can perform its authenticating function by determining whether the received incoming transmission contains a required coded number through comparing a coded number stored locally in memory with the coded number from the transmission to verify whether they match. Since the very first claim set in the priority PCT application from 2001, the disclosed approach to "determine the authenticity" of an incoming transmission received from a programming transmitter has been by "comparing said coded number [from the transmission] with a [stored] preset number" to verify whether

they "coincide." (Hensch. Decl. at Exh. 7, p. 3041).[2] As later recited in the first claim set from the '010 application itself, the "processing module . . . authenticates[s] the at least one transmission by comparing the coded number with a preset number" to determine if it "matches." (Hensch. Decl. at Exh. 8, p. 2029).

13. A POSITA would understand the intrinsic record disclosures identified above which explain specifically how the "processing module" is capable of performing its recited authenticating function as comprising a simple three-step algorithm. A POSITA would appreciate the three steps of this authentication algorithm as being the following: (1) identifying a coded number contained in a received incoming transmission; (2) retrieving a coded number stored locally in memory on the receiving device; and (3) comparing the coded number from the transmission with the coded number retrieved from memory to determine whether they match. (*Id.*)

14. Given the very simple and basic nature of the above algorithm and the state of the art that existed in the May 2000 time frame, any POSITA would have readily been able to write a software program for implementing such an algorithm for use in a wireless data module such as the claimed "programmable communicator" or elsewhere.

USAGE OF THE TERM "PROGRAMMABLE INTERFACE" IN THE PRIOR ART TO DESIGNATE A WELL-KNOWN CLASS OF PERIPHERAL INTERFACES

15. As recited in the "programmable interface" limitation that appears in independent Clams 1 and 52 of the '010 patent, the function of the "programmable interface" is to establish a communication link between the claimed "programmable communicator" and a monitored technical device. *See* ('010 patent at 12:25-26; 15:59-60). This function is confirmed in the specification where the "programmable

[2] As used herein, the term "Hensch. Decl." is a reference to the Declaration Of Marc N. Henschke In Support Of Defendants' Motion For Reconsideration Of The Court's Claim Constructions Of "Processing Module" And "Programmable Interface," filed concurrently herewith under separate cover.

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