

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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HUAWEI TECHNOLOGIES CO., LTD.  
and HUAWEI ENTERPRISE USA  
Petitioners

v.

NNPT, LLC  
Patent Owner

Unites States Patent No. 7,664,123

Case No. IPR2015-01390

Title: Generalized Virtual Router

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*Inter Partes* Review No. Unassigned

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**DECLARATION OF DR. DANIEL W. ENGELS, Ph.D.**

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I, Daniel W. Engels, hereby declare as follows:

**I. INTRODUCTION**

1. I have been retained by the law firm of Locke Lord Edwards LLP, counsel for Petitioners, to provide my opinions regarding whether U.S. Patent No. 7,664,123 (“the ‘123 Patent”) is anticipated by or rendered obvious over certain prior art.

2. I also reach certain opinions herein about the clarity and meaning of the relevant claim(s) from the perspective of a person having ordinary skill in the art to which the claimed subject matter pertains.

3. I have not previously been retained by either Locke Lord Edwards LLP or Petitioners in any capacity.

4. A copy of my *curriculum vitae*, which summarizes my credentials and qualifications that are described briefly below, is attached as Exhibit 1004.

5. I currently hold the opinions set forth in this Declaration.

6. In summary, it is my opinion that the prior art references cited herein either anticipate or otherwise render obvious the challenged Claim 1 of the ‘123 Patent.

**A. Background and Qualifications**

7. I am an Associate Professor in the Department of Computer Science and Engineering at Southern Methodist University (“SMU”), in Dallas, Texas.

8. I hold a Ph.D. in Electrical Engineering and Computer Science from the Massachusetts Institute of Technology, an M.S. in Electrical Engineering and Computer Science from the University of California, Berkeley, and a B.S. in Electrical Engineering from the University at Buffalo.

9. At SMU, I teach the computer networking courses titled “Computer Networks and Distributed Systems I” (“Networks I”) that is offered as course number CSE4344 and “Computer Networks and Distributed Systems II” (“Networks II”) that is offered as course number CSE7344. Additionally, I am developing, and will begin teaching in September 2015, an online course focused on security for computer networking and computing systems titled “Data and Network Security” (“Network Security”) that will be offered as course MSDS7349.

10. My background and training includes extensive Radio Frequency Identification (“RFID”) system design including communication protocol design, distributed system design for item identification, information management and networking, distributed system deployment utilizing RFID and bar code technologies including in retail and military supply chains and computer communication protocol design and evaluation.

11. My background and training includes extensive RFID system design and communication protocol design including leading the early development of the

EPCglobal Generation 2 (“Gen2”) UHF RFID air-interface communication protocol under the MIT Auto-ID Center as Director of Protocols and as founding Co-Chair of the EPCglobal Hardware Action Group, leading the development of three MIT Auto-ID Center Generation 1 RFID air interface communication protocols and participation within the GS1, ISO/IEC 18000-6 and ISO/IEC 18000-7 RFID standards development groups.

12. My background and training includes extensive distributed system and RFID system evaluation in supply chain management including co-managing the MIT Auto-ID Center Field Trial to demonstrate the usability of the EPC System within a functioning retail supply chain, advising the US DoD in their early RFID system supply chain demonstrations and trials and through consulting work with system integrators such as ODIN Technologies.

13. My background and training includes extensive evaluation of RFID and bar code technologies in the healthcare field, particularly the hospital and pharmaceutical supply chains, including as director of the Healthcare Research Initiative at the MIT Auto-ID Center.

14. I have authored or co-authored more than 90 peer reviewed articles on technologies, systems and applications related to distributed systems (including the EPC System), RFID systems and technologies, computer communications and applications. I served as the representative first from Revere Security and then

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