

UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of: Cameron *et al.*  
U.S. Patent No.: 5,915,210  
Issue Date: June 22, 1999  
Appl. Serial No.: 08/899,476  
Filing Date: July 24, 1997  
Title: Method and system for providing multicarrier simulcast  
Transmission  
IPR: IPR2016-00765

**DECLARATION OF DR. JAY P. KESAN**

1. My name is Dr. Jay P. Kesan. I understand that I am submitting a declaration for Mobile Telecommunications Technologies LLC (MTel”), offering technical opinions in connection with the above-referenced *Inter Partes* Review (IPR) proceeding pending in the United States Patent and Trademark Office for U.S. Patent No. 5,915,210 (the “’210 patent”), and prior art references relating to its subject matter. My current *curriculum vitae* is attached as Appendix A.
2. I also provide selected background information here relevant to myself, my experience, and this proceeding.
3. I am a Professor at the University of Illinois at Urbana-Champaign, where I am appointed in the College of Law, the Department of Electrical and Computer Engineering, the Coordinated Science Laboratory, and the Information Trust Institute. I have a Ph.D. in Electrical and Computer

Engineering from the University of Texas at Austin and a J.D., *summa cum laude* from Georgetown University. I have also worked as a research scientist at the IBM T.J. Watson Research Center, and I am a named inventor on several United States patents. I have also served as a technical expert and legal expert in patent infringement lawsuits. I have been appointed to serve as a Special Master in patent disputes.

Additionally, I have been appointed as a Thomas Edison Scholar at the United States Patent and Trademark Office (“USPTO”).

4. My opinions in this report are based on my experience and expertise in the field relevant to the Asserted Patents. To prepare this Report, I have reviewed and considered materials shown in Appendix B and referred to herein, principally including the ‘210 Patent, the Saalfrank reference, and the extrinsic evidence cited.
5. I anticipate using some of the above-referenced documents and information, or other information and material that may be produced during the course of this proceeding (such as by deposition testimony), as well as representative charts, graphs, schematics and diagrams, animations, and models that will be based on those documents, information, and material, to support and to explain my testimony before the Board regarding the validity of the ’210 Patent.

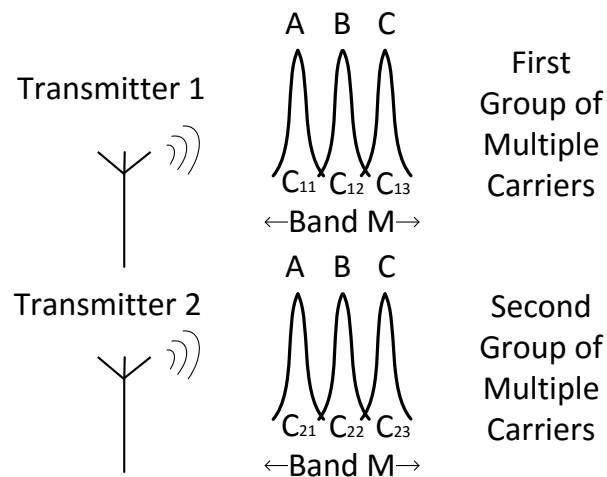
6. This report is based on information currently available to me. To the extent that additional information becomes available (whether from documents that may be produced, from testimony that may be given or in depositions yet to be taken, or from any other source), I reserve the right to continue the investigation and study. I may thus expand or modify my opinions as that investigation and study continues. I may also supplement my opinions in response to such additional information that becomes available to me, any matters raised by and/or opinions provided by MTel's experts, or in light of any relevant orders from the Board.
7. Throughout this report, I cite to certain documents or testimony that support my opinions. These citations are not intended to be and are not exhaustive examples. Citation to documents or testimony is not intended to signify and does not signify that my expert opinions are limited by or based solely on the cited sources.
8. I am an attorney, registered to practice before the United States Patent and Trademark Office, and a legal expert in United States Patent Law.
9. A person of ordinary skill in the art at the time of the invention (POSA) of the '210 Patent would possess a bachelor's degree in electrical or its equivalent and about four years working in the field of wireless telecommunications networks and would possess knowledge regarding

frequency, amplitude, and masks as used in telecommunications, or equivalent education and work experience.

10. The '210 Patent is directed to the field of telecommunications and to systems and methods for transmitting multiple carriers in simulcast.

11. Independent claims 1, 10, and 19 of the '210 Patent are part of the petition in the above referenced IPR.

12. Independent claims 1, 10, and 19 all recite transmitting in simulcast a first group of multiple carriers within a frequency band and a second group of multiple carriers within the same frequency band, where each carrier of the second group corresponds to and includes the same information as a respective carrier of the first group. These limitations are graphically depicted below in Drawing 1.



Drawing 1

13. In Drawing 1, Transmitter 1 and Transmitter 2 are shown transmitting in simulcast.
14. The '210 Patent describes that simulcast "provides multiple transmitters, operating on substantially the same frequencies and transmitting the same information positioned to cover extended areas." Ex. 1001 at 1:52-55.
15. A POSA would understand that simulcast means transmitting the same information at the same time from two or more different transmitters.
16. As a result, Drawing 1 shows Transmitter 1 and Transmitter 2 transmitting the same information (A, B, and C) at the same time.
17. Drawing 1 also shows Transmitter 1 and Transmitter 2 transmitting using multiple carriers within the same frequency band M. For example, Transmitter 1 uses carrier  $C_{11}$  to send information A, carrier  $C_{12}$  to send information B, and carrier  $C_{13}$  to send information C. Similarly, Transmitter 2 uses carrier  $C_{21}$  to send information A, carrier  $C_{22}$  to send information B, and carrier  $C_{23}$  to send information C.
18. Claims 1, 10, and 19 of the '210 Patent require that the carriers of Transmitter 2 correspond to and include the same information as the respective carriers of Transmitter 1. A POSA would understand this to mean that  $C_{11}$  and  $C_{21}$  have the same frequency and include the same information,  $C_{12}$  and  $C_{22}$  have the same frequency and include the same

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