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DECLARATION OF GERARD P. GRENIER

I, Gerard P. Grenier, am over twenty-one (21) years of age. I have never been convicted of a felony, and I am fully competent to make this declaration. I declare the following to be true to the best of my knowledge, information and belief:

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2. IEEE is a neutral third party in this dispute.

3. Neither I nor IEEE itself is being compensated for this declaration.

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8. The article below, along with its abstract, has been attached as Exhibit A to this declaration:

A.	B.M, Popovic, "Generalized chirp-like polyphase sequences with optimum correlation properties," IEEE Transactions on Information Theory, Vol. 38, Issue 4, July 1992.

9. I obtained a copy of Exhibit A through IEEE Xplore, where it is are maintained in the ordinary course of IEEE's business. Exhibit A is a true and correct copy of the Exhibit as it existed on or about April 5, 2016.

10. The article abstracts from IEEE Xplore shows the date of publication. IEEE Xplore populates this information using the metadata associated with the publication.

11. B.M, Popovic, "Generalized chirp-like polyphase sequences with optimum correlation properties" was published in IEEE Transactions on Information Theory, Vol. 38, Issue 4. The article abstract states that IEEE Transactions on Information Theory, Vol. 38, Issue 4 was published in July 1992. This publication happened no later than the last day of the month. The article is currently available for public download from the IEEE digital library, IEEE Xplore.

12. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001.

I declare under penalty of perjury that the foregoing statements are true and correct.

Executed on: 5 April 2016

EXHIBIT A

Generalized chirp-like polyphase sequences with optimum correlation properties

1 Author(s)

B. M. Popovic ; IMTEL Inst. of Microwave Tech. & Electron., Novi Beograd, Yugoslavia

A new general class of polyphase sequences with ideal periodic autocorrelation function is presented. The new class of sequences is based on the application of Zadoff-Chu polyphase sequences of length $N=sm^2$, where s and m are any positive integers. It is shown that the generalized chirp-like sequences of odd length have the optimum crosscorrelation function under certain conditions. Finally, recently proposed generalized P4 codes are derived as a special case of the generalized chirp-like sequence

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