

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

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**ZTE (USA), INC.**

**Petitioner,**

**v.**

**FRACTUS, S.A.,**

**Patent Owner.**

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**IPR No. IPR2018-01461**

**U.S. Patent No. 9,054,421**

**Issue Date: June 9, 2015**

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**DECLARATION OF CHRIS G. BARTONE, Ph.D., P.E.  
IN SUPPORT OF  
PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 9,054,421**

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