Attorney Docket: 3749.1570000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Digital Harmonic LLC
Serial Number:	88/230,371
Filing Date:	December 14, 2018
Mark:	DIGITAL HARMONIC
Examining Atty:	Jeffrey S. DeFord
Law Office:	115

Commissioner for Trademarks
P.O. Box 1451
Alexandria, Virginia 22313-1451

DECLARATION

1. I, Gene A. Frantz, being warned that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and may jeopardize the validity of this application or any resulting registration, declare that all statements made herein of my own knowledge are true; and all statements made herein on information and belief are believed to be true.

2. I am the founder and former Chief Technology Officer of Octavo Systems (Exhibit A: see attached from https://octavosystems.com/about/the-team/). Octavo Systems is recognized as "the leader in designing and supplying system-in-packaging (SIP) based solutions, also known as multi-chip modules (MCMs) to innovators around the globe" (Exhibit B: see attached from http://www.ti.com/tool/OCTVO-3P-AM335X).

3. I am also a Professor in the Practice in the Electrical and Computer Engineering Department at Rice University in Houston, Texas. (Exhibit C: see attached copy of professional biography from https://eceweb.rice.edu/genefrantz.aspx).

4. My academic activities have been focused on signal processing, which is the "analysis and transformation of signals -- measurements taken over time and/or space -- in order to better understand, simplify, or recast their structure." (Exhibit D: see attached excerpt from

https://eceweb.rice.edu/dsp-systems-and-wireless). According to Rice University, "current research [in Digital Signal Processing (DSP). Systems, and wireless] spans a wide range of areas, including image and video analysis, representation, and compression; wavelets and multiscale methods; statistical signal processing, pattern recognition, and learning theory; distributed signal processing and sensor networks; communication systems; computational neuroscience; and wireless networking. Machine Learning is a large part of our Systems Research." (Exhibit D: see attached excerpt from: https://eceweb.rice.edu/dsp-systems-and-wireless).

5. Previously, I was the Principal Fellow at Texas Instruments, where I built my career finding new opportunities and building new businesses to leverage Texas Instruments' DSP technology.

6. I have the following degrees:

B.S. Engineering, University of Central Florida (1971)
M.S. Electrical Engineering, Southern Methodist University (1977)
MBA, Texas Tech University (1982)

7. I am also a Fellow of IEEE (Exhibit E: see attached excerpt from https://www.ieee.org/about/vision-mission.html?WT.mc_id=lp_ab_mav).

8. I know that Digital Harmonic, LLC ("Digital Harmonic") is the owner of the **DIGITAL HARMONIC** trademark for

> scientific research equipment and software for waveform and image analysis and characterization; sonar; radar apparatus; waveform and image analysis and characterization equipment, namely, waveform and image analyzers, for use in military, law enforcement, civil, scientific, and industrial applications; waveform and image analysis and characterization software for use in military, law enforcement, civil, scientific, and industrial applications, in **Class 9**; and
>
> medical diagnostic equipment, namely, waveform and image analyzers, for waveform and image analysis and characterization in **Class 10**.

9. I first became aware of the Applicant, Digital Harmonic, LLC and its products initially in 2005 then more direct involvement occurred in 2010-2011 while an employee of Texas

Instruments. My job was to seek out new users and uses of technology and one of those new uses was with the DIGITAL HARMONIC software. I helped introduce this particular software and its capabilities to third-party consumers. Thus, I am intimately familiar with its features, function, characteristics, purposes, and uses.

10. Digital Harmonic's software does not record, capture, or digitally express harmonics. Anyone who works in or understands the digital domain, knows there is no such thing as a "digital harmonic" – harmonics are a phenomena in the analog world. Moreover, Digital Harmonic's technology is a uniquely different approach from classical signal processing theory.

11. Due to my personal and professional passion for developments in the electrical engineering and computer engineering industry and related/overlapping industries, e.g., highly specialized software such as that sold by Digital Harmonic, I stay as informed and current as possible about developments in all these areas.

12. I am unaware of any significance of DIGITAL HARMONIC in my profession, in the electrical, engineering, software, or military industries.

13. I do not believe that, nor do I think my peers in my industry, or likely consumers would believe, the DIGITAL HARMONIC mark immediately conveys direct information about the exact nature of the software products, i.e., a feature, characteristic, more importantly purpose, or use. In fact, most people seeing or hearing the DIGITAL HARMONIC mark would likely think it has something to do with music, which is completely inaccurate. Digital Harmonic it is an oxymoron. Those with an understanding of technology would find the DIGITAL HARMONIC mark would find it a bit humorous. I am one of those who finds the combination of "digital" and "harmonic" a bit humorous and have had my mind wandering as I considered how the two combined words could take meaning. I have found that my own mental process to make sense of the concept these two words (digital and harmonic) might compose has not yet come to a conclusion. But

I'm still thinking. I will additionally note that, as I understand the fundamental concepts of the underlying technology of the company, I have found no relationship of their technology to the DIGITAL HARMONIC mark.

14. There is no such "thing" as a "digital harmonic."

15. I understand and recognize DIGITAL HARMONIC as a term that has been coined by the company Digital Harmonic. In fact, it is only in relation to this company and their products that I have ever heard this term.

16. To the best of my knowledge and belief, no other individual, firm, corporation, or association is using the term DIGITAL HARMONIC to describe their products/services. To the best of my knowledge and belief, the DIGITAL HARMONIC trademark is not merely descriptive of the applied-for goods.

Signature: Gene C Frantz

Name: Gene A Frantz
(Print Name)

Title: Founder, Octave Systems LLC

Date: 22 November 19