

IN THE CIRCUIT COURT OF THE  
EIGHTEENTH JUDICIAL CIRCUIT, IN AND  
FOR SEMINOLE COUNTY, FLORIDA

STATE OF FLORIDA,

Plaintiff,

vs.

CASE NO.: 2012-001083-8

GEORGE ZIMMERMAN,

Defendant.

FILED IN  
EAST BRANCH OFFICE  
MAR YANNE MORSE  
CLERK OF CIRCUIT COURT  
13 MAY 23 AM 10:01  
SEMINOLE CO. FLA.  
D.C.

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DEFENDANT'S REPLY TO STATE'S RESPONSE TO DEFENDANT'S MOTION FOR  
EVIDENTIARY HEARING

COMES NOW the defendant, GEORGE ZIMMERMAN, by and through his undersigned counsel, and files his Reply to the State's Response to Defendant's Motion for Evidentiary Hearing and as grounds therefore states at follows:

The state objects to the Court holding a *Frye* hearing regarding speaker identification and speech recognition and asserts that "the processes in question have been offered (in some cases, by these very same witnesses) in courts for years, even decades." In support of this sweeping statement, the state contends that there is nothing new or novel in the expert testimony it intends to offer and therefore a *Frye* hearing is inappropriate. The defendant contests this claim and can support through expert testimony that the science of speaker identification is widely disputed in the scientific community and that some methodologies once favored as forensic evidence (so-called "voiceprint" or spectrographic analysis, for example) are no longer generally accepted in the scientific community for use as forensic evidence. Previously admitted evidence involved the comparison of directly recorded speech exemplars to other speech exemplars to determine if

they were from the same speaker. The defense knows of no cases where speaker identification testimony was admitted involving the comparison of speech exemplars to short bursts of yelling or screaming of unclear speech content captured at a distance and recorded in the background of a conversation between two additional speakers. It is the general consensus of the scientific community that reliable speaker identification under such circumstances is not possible given the current state of the art and science. Further, the defendant will show through expert testimony that the specific methodologies utilized by the state's various experts in voice identification, and the application of those methodologies to the facts in this case, are not generally accepted in the scientific community of speaker identification and speech recognition experts. Accordingly, the opinions offered by the state's experts do not satisfy the *Frye* test of admissibility.

The state's experts each use completely different methodologies in arriving at their opinions in the case. Mr. Tom Owen uses proprietary software called Easy Voice Biometrics, the technical details of which have never been disclosed<sup>1</sup>. Upon information and belief, his specific method of speaker identification has not been peer-reviewed or independently validated with regard to reliability, or ever subjected to a rigorous *Frye* hearing. The defendant is prepared to offer expert testimony that this method of speaker identification is new and novel, as contemplated by *Frye*, and is not generally accepted in the speaker identification scientific community. The defendant specifically requests a *Frye* hearing on Mr. Owen's methodology in general, and also the application of that methodology to the facts of the case.

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<sup>1</sup> The defense was provided copies of Mr. Owen's materials on May 20, 2013 by email. There is a motion pending to address Mr. Owen's expert witness fee. Discovery is still incomplete regarding this witness.

The state also offers the opinion testimony of Dr. Alan Reich<sup>2</sup>. Dr. Reich offers opinions in both speech recognition and speaker identification. Dr. Reich does not clearly identify the methodology he uses for speech recognition in his report other than application of an unspecified form of enhancement and common amplification. Dr. Reich has been able to identify "speech" in the evidence recordings that has not been identified by any other expert, including the other state experts and the FBI. Dr. Reich claims to not only identify speech that no other expert has identified, but also to be able to identify the speaker as well. It's unclear from his report how he reached his conclusions (although it appears that a spectrograph analysis was involved) and the state bears the burden of establishing that his methodologies and the opinions reached from his application of them to the facts of the case are generally established in the scientific community. Neither the state nor Dr. Reich offer any evidence that such an approach has any reliability in the comparison of short bursts of yelling to speech exemplars or in recognizing word content embedded in stress-induced yelling and captured at a distance. We know of no previous cases in Florida or any in other state in which such evidence was admitted. The defendant requests a *Frye* hearing regarding Dr. Reich's methodology in both speech recognition and speaker identification as well as how that methodology was applied to the facts of the case. The defendant is prepared to offer expert testimony at an evidentiary hearing that Dr. Reich's methodology and his application of that methodology to the facts of this case is not generally accepted in the relevant scientific community.

The state is also offering the testimony of Dr. Harry Hollien and Dr. James Harnsberger. Dr. Hollien and Dr. Harnsberger utilize the aural perceptual approach to speaker identification

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<sup>2</sup>The defense received Dr. Reich's preliminary report by email after hours on May 10, 2013 and after written request to the state, on May 14, 2013 the defense received a copy of the materials Dr. Reich had attached to his report. His deposition is tentatively scheduled for May 24, 2013.

which is based on critical listening. With this approach, Dr. Harnsberger and an assistant listened to the recorded 911 call with the various screams for help, isolated several (16) short "utterances"<sup>3</sup>, six of which they decided could be used for aural perceptual analysis. Through repetitive critical listening he and Dr. Hollien attempted to make a match with one or more of the "utterances" to the known samples of Trayvon Martin and George Zimmerman's voices. Dr. Hollien and Dr. Harnsberger did not make a match of any of the unknown "utterances" with Trayvon Martin or George Zimmerman's voice. In their report they explained the challenges of attempting to do a voice comparison analysis in this case. The "speech" consisted only of a few barely discernible words giving the illusion of speech – "help" or "help me" – and the total usable speech from all the utterances combined was a little more than eight seconds, considerably less than what is considered to be the minimal number of words or seconds of speech before undertaking such analysis. Further, the speech consisted mostly of screams under high stress overlapped by the voices of the resident who made the call and the 911 operator.

While Dr. Hollien's aural perceptual methodology has had some acceptance in the relevant scientific community neither he nor Dr. Harnsberger were able to make a match (even at their "weakest match" level) using that methodology but only concluded there were "tendencies" toward speaker identification with some of the "utterances". Any testimony by them to their "impressions" and "tendencies" about speaker identification would only confuse and mislead the jury and result in the jury to giving their testimony more weight than it deserves. The prejudice to the defendant of this misleading and confusing testimony would substantially outweigh any

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<sup>3</sup> On April 19, 2013 Dr. Harnsberger agreed to provide the data used in his analysis and copies of the various recorded pairings along with a timeline indicating where the "utterances" were taken from the 911 call recording. Notwithstanding repeated reminders, this data has not been received as of this writing. This has caused delay to the defense and has affected its ability to be prepared for the *Frye* hearing.

probative value that could be derived from the testimony. Further, the application of this methodology to the facts of the case would be new and novel given such a limited voice sample for comparison and the distorted and high stressed nature of the voice recordings, and is subject to a *Frye* hearing separately from the acceptance of the methodology itself. The aural perceptual methodology utilizes up to 10 individual voice characteristics (plus subparts) to compare between known and unknown speech samples. Because of the circumstances of the recorded speech in this case, most of the characteristics used to make an identification were not present and available for comparison. The "utterances" on the recording were screams and cries of short duration, grossly distorted from normal speech, made under extreme stress and not suitable for speaker identification under the usual aural perceptual methodology. The defendant is prepared to offer expert testimony that the use of the aural perceptual method of voice identification is not generally accepted in the relevant scientific community under the facts of this case. Even Dr. Hollien and Dr. Harnsberger urge that caution be used regarding their analysis, as they recognize that they may be wrong even on those aspects of their work where they formed an impression.

Both the underlying methodology utilized by the expert and the application of that methodology to the facts of the case are subject to a *Frye* determination. Even when a particular methodology has been accepted by the scientific community (and evidence based on it admitted in court) under very different conditions, the application of the methodology to the facts of this case must pass *Frye* muster. As the Florida Supreme Court stated in rejecting expert testimony relating to the marks made by a knife,

[a]lthough several of the State's experts testified that the underlying principle employed by Hart is generally accepted in the field, we conclude that this testimony standing alone is insufficient to establish admissibility under *Frye* in light of the fact that Hart's testing procedure possesses none of the hallmarks of acceptability that apply in the relevant scientific community to this type of evidence.

*Ramirez v. State*, 810 So. 2d 836, 849 (Fla. 2001).

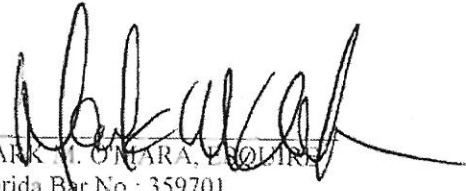
At a minimum, that's the situation we have here. The state's voice experts have applied their various methodologies to try to identify the speaker(s) on a poor quality recording of yelling or screaming of short duration made under high stress and captured at a distance in the background of a conversation between two other individuals. Even if the Court were to accept the state's representation that one or more of the methodologies utilized has general acceptance in the relevant scientific community when applied to the comparison of speech exemplars recorded by a single speaker directly into a microphone under normal speech conditions, the use of that methodology as applied to the specific facts of this case is still "new" and "novel" and subject to a *Frye* determination. The defendant will offer expert testimony that because of the limited sample size, the speaker being under high stress, the poor quality of the recording, and the indirect capture of the exemplars at a distance, it is not considered suitable for analysis by the voice identification scientific community.

WHEREFORE, the defendant urges this Honorable Court to conduct an evidentiary hearing regarding the admissibility of voice identification and speech recognition testimony of the state's expert witnesses.

Respectfully submitted,



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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished by  
 U.S. Mail ~~overnight~~ / Hand Delivery this 22 day of May, 2013 to Bernie de la Rionda,  
 Assistant State Attorney and John Guy, Assistant State Attorney, Office of the State Attorney,  
 220 East Bay Street, Jacksonville, Florida 32202-3429.



DONALD R. WEST