INVENTION DISCLOSURE

1. **Invention Title.**

Detection of High Definition Voice on analog twisted pair phone lines

2. **Invention Summary.**
Compare the upper half of the HDV audio spectrum (4-7kHz) with the lower half (300-3kHz) to determine if the delivered audio on twisted pair phone line is HDV.

3. **Invention Description**.

a. Describe the invention in detail.
By comparing the upper half of the HDV audio spectrum (4-7kHz) with the lower half (300-3kHz) of the spectrum for levels and tones it can be determined if the analog audio being delivered to a device is either High Definition or normal audio. The frequency response for the normal phone audio is 300-3kHz while HD audio is 50-7kHz. By sampling the upper range of the HD audio 4-7kHz and the lower range from 300-3kHz and comparing the levels and tones present during action speech it is possible to detect if the received audio is High Definition. The result can be used for signaling of a HD call or implementation of HD filtering if needed.

b. Why was the invention developed? What problem(s) does the invention solve? How is it better?
Currently there is no method in place to indicate if the current active call is an HD call or not. The industry is attempting to determine how to signal the user handset over the standard analog twisted pair phone line of the type of call that is active. This will allow the handset to display if the current active call is of an HD type based on the audio spectrum being received. Based on the output of the comparison, signaling can then trigger the display on the handset to indicate an HD call or some other indicator

c. Briefly outline the potential commercial value and customers of the invention.
Being able to detect an HD calls will allow marketing of the HDV feature by both service provides and handset CE vendors. This will added to marketing value in feature presentation. The consumers will be able to determine why there is a difference in call quality when HD is available but not used in all cases depending on the call far-end functionality and features. This method of comparison detection will also reduce having to add additional functional and signaling to both MTA/DVA and handsets to enable HD indications.

4. **HOW is this invention different from existing products, processes, systems?**
There are no existing systems in place to allow signaling to the handset that the current active call is an HD call.