

## A Trusted Hybrid Software Radio

### **Disclosure Number**

200501542

### **Technology Summary**

A Trusted Hybrid Software Radio is an ultra-reconfigurable radio capable of executing a plurality of waveforms and protocols with software flexibility, hardware performance, and strong hardware-based "root-of-trust" authentication and machine attestation capability for multi-layer security. It consists of one or more transducers and a Trusted Hybrid Processor (described in EIDR# 166 submitted 3/18/2005). The Trusted Hybrid Processor provides a means of establishing a strong hardware-based "root-of-trust" thus enabling multi-level authentication and machine attestation of everything touching the Trusted Hybrid Software Radio including users, software (waveforms, applications, device drivers), data/information, hardware and configuration/reconfiguration of internal circuits, interconnects and attached components. Waveform/protocol descriptions may be stored on the device. New waveforms/protocols may be transferred to the device. A Hybrid Software Radio would be capable of global interoperability across a variety of frequencies and communications standards. It would be capable of global interoperability across a variety of frequencies and communications standards. Upgrades, enhancements, and modifications to existing waveforms as well as yet to be developed waveforms could be uploaded as needed.

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