



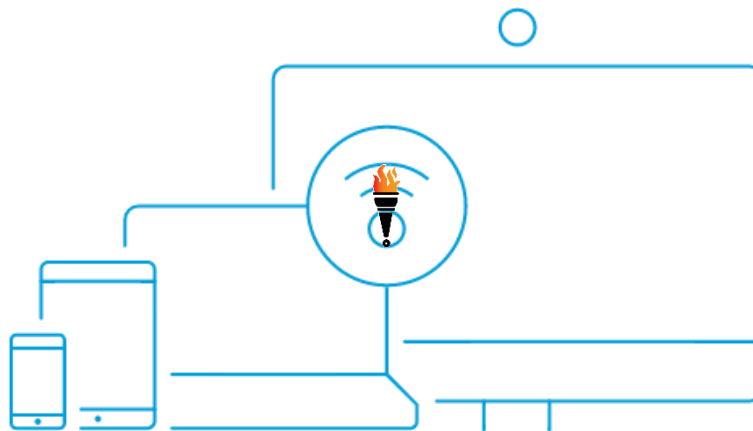
## Cisco employing PONS in millions of daily events

### PONS deployed in Cisco's Intelligent Proximity

Prometheus Orthonormal Set (PONS) coding is the foundation of Cisco Systems' second generation 'Intelligent Proximity' which lets user PC, MacOS, Apple iOS and Android devices connect to Cisco telepresence systems (MX, SX, IX and Room Series devices). Intelligent Proximity uses acoustic information - sent in the ultrasound region - for this pairing/association.

PONS is used for both synchronization and user information transmission in a new form of self-synchronizing discrete sequence spread spectrum (base patent US 10,003,377). In this use both PONS' autocorrelation property (large zero autocorrelation zone) and energy spreading property (<http://prometheus-us.com/PONS-papers/covert-PONS.pdf>) are exploited in highly reverberant (high multi-path) acoustic rooms. In these environments the dominant-path desired signal is often buried in a form of self-interference (reverberation) and decodes must routinely occur in negative SNR.

This PONS-based Intelligent Proximity spread spectrum design is emitted by tens of thousands of telepresence endpoints, is received by hundreds of thousands of user endpoints and robustly supports millions of 'ultrasonic token pairing' events each and every day. Thus, among other things, PONS is proven for use in high-multipath environments.



This image, using <https://proximity.cisco.com/>, incorporates the Prometheus logo indicating where PONS is deployed by CISCO. To learn more about the properties of PONS, such as its inherent and naturally covert energy spreading, and to see a real-time demonstration illustrating these properties, contact Jim Byrnes at 781-784-2355, [jim@prometheus-us.com](mailto:jim@prometheus-us.com).