I^3

Intelligent IOT Integrator (I^3)
University of Southern California
A joint project: Marshall and Viterbi

Guiding Principles
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I³ Consortium Guiding Principles

The I³ consortium is an open consortium that was created to encourage the formation of community based IOT networks. To do so, the consortium will 1) work with suppliers to create an environment that simplifies the testing and evaluation of IOT networking components, 2) build and evaluate concepts and tools needed to create and manage trust in a community of independent device owners, and 3) distribute software/information to encourage the common evolution and networking of IOT communities.

The specific goals of the I³ Consortium are as follows:

- Integrate software from different sources to create a city-scale IOT test/demonstration system.
- Create a test/demonstration system can prove functionality, provide operational testing, and generate market data needed to evaluate return on investment.
- Expand our understanding of IOT marketplaces and privacy by evaluating concepts that encourage or inhibit the emergence of community data-rivers such as data ownership, incentives, and trust.
- Build an opensource deliverable from the core I³ software that can be distributed to other community based IOT data rivers to encourage systemic evolution from a common foundation.
- Develop network functions need to allow different and independent I³ data rivers to interact and exchange data effectively an IOT data marketplace.
- Stimulate IOT device deployment and data sharing by independent device owners by addressing security and privacy needs as a complement to an incentive and trust building system.
- Provide application developers access to aggregated real time IOT data-rivers on an as needed basis.
- Encourage increased application side use of data-rivers by AI systems, applications, and data brokers for more intelligent decision making.
- Create a virtualized representation of the IOT device to a network infrastructure in order to isolate the devices with uncertain pedigree from damaging the network.

USC will act as the I³ consortium manager and will provide a suitable IOT test environment for the I³ consortium members. The test environment will be expandable to include the City of Los Angeles in order to demonstrate scalability. The I³ consortium USC will seek corporate contributions and research grants to grow the I³ vision and to support research that makes use of the I³ environment. I³ members will have access to pre-release software and the testing/demonstration facilities. AS an opensource program, non- I³ members will be encouraged to contribute to the I³ software based on the distributed software.

The I³ consortium will support different levels of membership to encourage participation from individuals, small companies, and large companies alike. Interested companies will be free to select a membership level that matches their desired level of community interaction.