Glenn Ricart

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Brief Bio

Glenn Ricart is the Founder and Chief Technology Officer of US Ignite, a nonprofit organization with a mission to create an ecosystem of innovative applications in smart and connected communities leveraging emerging technologies. Technologies of special interest include wired and wireless gigabit to the end user, software-defined locavore infrastructure, software-defined performance engineering, and privacy and security through virtual infrastructure slicing. Dr. Ricart is also Adjunct Professor in the School of Computing at U. of Utah.

Previously, Ricart was CEO of National LambdaRail, Managing Director of PricewaterhouseCoopers, Executive Vice President and CTO of Novell during its heyday in the 1990s, Assistant Vice Chancellor and academic CIO of the University of Maryland, and Program Manager at DARPA. He has also founded or co-founded five startups. His early work on the Internet has led to his induction into the Pioneer's Circle of the Internet Hall of Fame.

Research Directions and Related Testbed Infrastructure Requirements

US Ignite will be coordinating the implementation of a locavore wired/wireless infrastructure in at least 15 American cities as a result of a recent NSF grant. The issues of future wireless cities are important to the long-term success of this infrastructure designed to facilitate city-based mobility for the Internet of Things and for future high-bandwidth, low-latency applications in education, public safety, transportation, clean energy, advanced manufacturing, and healthcare.

Possible research directions and related testbed infrastructure requirements include:

- Research on efficient use of the Citizens Broadband service to provide ubiquitous community wireless access originating at the city's community anchor institutions
- Hypervising (including scheduling and timing) high priority flows
- Integrating cloud RANs and software EPCs (or their successors) with software-defined infrastructure (SDI / SDX)
- Optimizing multiple instancing of single user MIMO
- Miniaturizing phased array antennas or their electronic equivalent
- Agile band selection based on specific physical location
- Preferential reduction of noise floor for very low power devices
- Software preemption for national TSP (Telecommunications Service Priority) in cases of national emergency or national command uses
- Defining per-segment-stream slicing
- Protecting spaces (spectrum, codes, power levels) for further innovation

Travel reimbursement is requested.