

# Urbana-Champaign Smart Gigabit Community

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## IMPROVE DIGITAL INCLUSION AND DIGITAL EQUITY

**Digital Inclusion** refers to the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and use of Information and Communication Technologies.

**Digital Equity** is a condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy and economy.

1993: **Prairienet**

2005: **Community Informatics Initiative**

2009: **UC2B**

2016: **US Ignite SGC**



### Team

#### Steering Group:

- Tracy Smith, Director of Research IT at U of I, Principal Investigator of the U-C SGC project
- Chieh-Li "Julian" Chin, Research Manager at iSchool, and Tech Leader of the U-C SGC project
- Lisa Bievenue, Assistant Director of Illinois Informatics Institute
- Sharon Irish, Project Coordinator at iSchool
- Martin Wolske, Senior Research Scientist at iSchool

**Founding Principal Investigator:** Dr. Jon Gant, Founding Director of the Center for Digital Inclusion at iSchool, Dean and Professor at the School of Library and Information Sciences at North Carolina Central University

### Motivation

- Develop short and long-term research and operational strategies for the advancement of the Urbana Champaign Big Broadband (UC2B) digital infrastructure
- Support community-wide network for research, development and demonstration (RD&D) of smart community and next-generation innovative applications that enhance robust digital learning, solve socio-technical challenges, and improve digital inclusion and digital equity in our community

### Approach

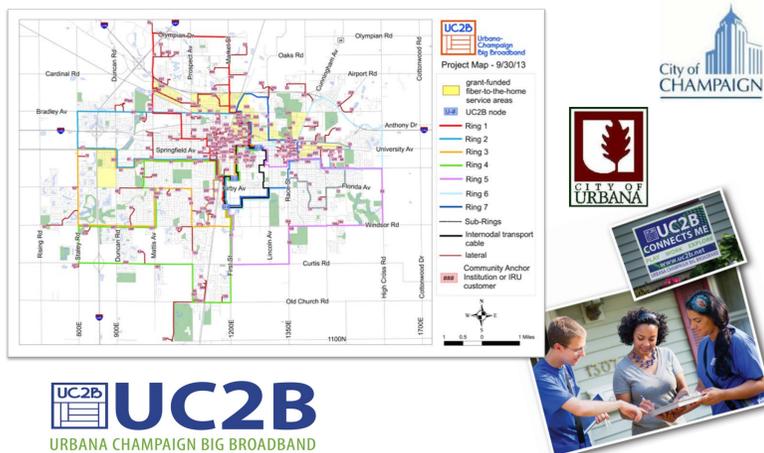
- Build strategic relationships with local government, civic leaders, and community anchor institutions to identify socio-technical issues in our community
- Collaborate with multidisciplinary research teams in the University to develop research projects and advanced socio-technical solutions
- Partner with US Ignite to serve as one of the dozens national gigabit applications test-bed communities and connect with other smart gigabit communities

### Results

- Foster design and development of gigabit applications projects focused on Health Care, Public Safety, and Education
- Initiate smart community ecosystem through community activities, e.g. CU hack night event, Reverse Pitch Challenge

### Impacts and Future Work

- Enhance awareness of socio-technical opportunities, challenges, and strategies for smart community
- Encourage more researchers and developers to work on smart applications that can solve socio-technical issues
- Engage with community stakeholders further to build digitally inclusive communities



## Featured Partnership: Smart Gigabit Community Reverse Pitch Challenge at Urbana-Champaign

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- Empower the local change makers and idea generators to ideate and develop innovative gigabit applications solutions that addresses the socio-technical challenges in our community
- Use open municipal data to Improve efficiency of city services with data visualization and analysis
- Support city services in national priority areas, enhance civic awareness of socio-technical issues, and develop the ecosystem for a smart community

### Smart Gigabit Applications in Our Community

#### Healthcare

- AirVR - Virtual Intubation Simulator: Train medical students to perform Endotracheal Intubation in an animated, self-learning, immersive Virtual Reality environment
- Medical AI Translation Assistant: Reduce language, health literacy, and cultural barriers between patients and doctors
- TEEVE: supports real-time collaborative physical activities among multiple remote sites to provide physical therapy services

#### Education

- Virtual Fab Lab: Enable high-definition video sharing and communication between informal learning spaces

#### Research

- 4CeeD: Improve real-time research data curation among researchers across research institutions

### References

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