

**WiMAX Prototyping in Metro Detroit:
Integrating GENI Engineering with Wireless Network Applications and Science**

Status Report: GEC13

Technical Contact:

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1. Major accomplishments

- Completed the deployment plan, including WiMAX base station deployment and VLAN connectivity to GENI backbone
- Completed the spectrum management/coordination with Clearwire and Windsor (Canada), and completed spectrum loan from Clearwire
- Submitted base station requirements to GPO/Rutgers/AirSpan
- Purchased 20 WiMAX dongles

2. Milestones achieved

- WIMXWAYNE: S4.a Demonstration at GEC12 and Experimenter Outreach
 - Done.
- WIMXWAYNE: S4.b Documentation and Code Release
 - Done
- WIMXWAYNE: S4.c Demonstration at GEC13 and Experimenter Outreach
 - Done
- WIMXWAYNE: S4.d Documentation and Code Release
 - Done
- WIMXWAYNE: S4.e Demonstration at GEC14 and Experimenter Outreach (Due 07/31/12)
 - Work in progress
- WIMXWAYNE: S4.f Final report and code release (Due 08/15/12)
 - Work in progress

3. Deliverables made

1. Initial deployment plan: <http://groups.geni.net/geni/attachment/wiki/WIMXWAYNE/WayneWiMAX-deployment-plan-GEC12.pdf>
2. Refined/final deployment plan: <http://groups.geni.net/geni/attachment/wiki/WIMXWAYNE/WayneWiMAX-deployment-plan-GEC13.pdf>

4. Description of work performed since last status report

- Completed the deployment plan, including WiMAX base station deployment and VLAN connectivity to GENI backbone

- Completed the spectrum management/coordination with Clearwire and Windsor (Canada), and completed spectrum loan from Clearwire
- Established contacts with the campus IT team as well as facility team for the actual network/base-station installation
- Submitted base station requirements to GPO/Rutgers/AirSpan
- Purchased 20 WiMAX dongles

5. Project participants

Investigators:

Hongwei Zhang

Jayanthi Rao

TJ Giuli

Jing Zhu

Xiangying Yang

Patrick Gossman

Postdoc/students:

Chuan Li

Yu Chen

Yuehua Wang

6. Publications (individual and organizational)

N/A.

7. Outreach activities

- Presentations to a delegation of researchers/engineers from DENSO North America

8. Other Contributions

- Helped establish collaboration between GENI WiMAX and Clearwire, e.g., on spectrum management
- Helped establish collaboration between GENI WiMAX and Sprint, e.g., on WiMAX handheld and LTE collaboration

- Contributed to the WiMAX Working Group activities