

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

Status Report: GEC14

Technical Contact:

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1. **Major accomplishments**

- Obtained Spectrum loan from Clearwire
- Completed the WiMAX base station installation plan, including scheduling external contractors for installing the base stations
- Completed the measurement plan of WiMAX network
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- Purchased all the necessary equipment for the installation, including mounting masts/pads, network cables, three WiMAX mobile stations (i.e., laptops + WiMAX cards), as well as two servers for configuring WiMAX base stations and for supporting user-experiments

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
 - Work in progress
 - Because we did not receive the base stations until late June, our installation and project was delayed. We are actively working with the GENI community and our university in catching up in time, and we expect to have the base stations installed and operational by the end of August or September 2012.
 - Negotiated with the facility and IT departments for WiMAX base station installation
 - Coordinate with building re-roofing team for base station installation
 - One Server being installed with Windows Server 2008 R2
 - Additional Server ready to install OMF/OML
- WIMXWAYNE: S4.f Final report and code release
 - Work in progress

3. Deliverables made

- Installation plan
- Measurement plan for the WiMAX network
- Ready for installing the WiMAX network
- Status report at GEC14: <http://groups.geni.net/geni/attachment/wiki/WIMXWAYNE/WayneWiMAX-deployment-planAndStatus-GEC14.pdf?format=raw>

4. Description of work performed since last status report

- Obtained Spectrum loan from Clearwire
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- Completed the measurement plan of WiMAX network
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5. Project participants

Investigators:

Hongwei Zhang

Jayanthi Rao

TJ Giuli

Jing Zhu

Xiangying Yang

Patrick Gossman

Postdoc/students:

Yuehua Wang

Chuan Li

Yu Chen

6. Publications (individual and organizational)

N/A.

7. Outreach activities

- Presentation to college students from China who visited our lab to understand the project

8. Other Contributions

- Loan one WiMAX base station to NYU-Poly for improved GENI progress