



# THE COMPUTERWORLD HONORS PROGRAM

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## CASE STUDY

LOCATION:  
*Athens, Georgia,  
United States*

YEAR:  
*2006*

STATUS:  
*Laureate*

CATEGORY:  
*Education and Academia*

NOMINATING COMPANY:  
*Sybase*

### ORGANIZATION:

University of Georgia New Media Institute

### PROJECT NAME:

New Media Institute

### Summary

The New Media Institute (NMI) at the University of Georgia is chartered to discover and demonstrate new, innovative ways that mobile technology can have a positive impact on people's quality of life. To this end, NMI students develop prototype applications that people can use and evaluate.

The NMI was seeking a way to reduce the management burden of maintaining software and settings on the mobile devices distributed to and used by people to test and evaluate applications developed to leverage a free, urban wireless network infrastructure NMI implemented in downtown Athens, Georgia.

Using advanced frontline management technology, NMI demonstrated that it was possible to create any number of mobile information applications, and transparently manage the mobile device platforms from which that information would be accessed.

### Introductory Overview

Most IT professionals, including developers, live very much in the present. It seems there is always a pressing need or crisis that demands their attention, drawing them into the trenches where imagineering is difficult to do.

The staff and students at the New Media Institute (NMI), an interdisciplinary teaching and research unit at the University of Georgia located in Athens, Georgia, on the other hand, focus exclusively on envisioning and creating the future. Specifically, their mission is to explore the creative, critical and commercial dimensions of innovative digital media technology.

When NMI was founded in 2000, it focused on Internet technology. More recently, however, as the result of an NMI-sponsored retreat involving students, business leaders, faculty and government officials, NMI shifted its focus to "mobile media."

Mobile media is a term used by NMI to describe the fundamental change in people's relationship with information as the result of mobile technology. Where information used to be a destination – a library or bookstore, for instance – mobile technology is changing that so it is



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becoming more of a companion that travels with you everywhere you go, enhancing your experiences along the way.

Wanting to explore this trend in more depth, NMI decided to find out what types of content people wanted and what technologies they wanted to use to access information. In a typical research organization, an investigation like this would involve surveying target populations with questionnaires. But NMI is not a typical academic organization.

As a starting point, NMI created a wireless environment – the WAGzone, encompassing the 24 square-block downtown Athens area – to serve as a real-world test bed for experiments with mobile applications.

With the wireless network infrastructure up and running, NMI could turn its attention to how the WAGzone could be used to explore the possibilities of mobile media, improve the quality of life for members of the community and spur economic development.

NMI realized it needed a delivery platform for the students' various mobility projects and procured 100 Pocket PC devices for that purpose. All that was left to do was unleash the students' creativity and begin developing innovative mobile applications. And so they did.

One application developed as part of this project was called Rendezvous. This application enabled students going into downtown Athens to find each other by logging onto the application and entering their location. When their friends arrived downtown, they logged onto the application to see exactly where all of their friends were, thus enabling them to rendezvous with them.

Another project, created to promote Athens' musical community, was a walking tour of the various music venues in downtown Athens. As visitors arrived at each venue, they could view video clips of performances as well as interviews with people talking about the best shows they'd seen at that venue.

To showcase downtown Athens and support local retailers, NMI created an Athens portal called The Cloud, which provided users with an easy, one-stop way to access information about local events, special opportunities and promotions.

Naturally, NMI wanted to demonstrate these and other projects to a wide audience including other academic institutions, business leaders, government officials, etc. As it set about doing so, it discovered it had a problem.

Simply put, managing the delivery platforms – the PocketPCs – turned out to be a nightmare. Even though NMI lent these devices out to people on a daily basis, users treated them as if they were their own. They felt quite comfortable changing settings and installing new software. Additionally, after they returned the devices the batteries would often run down and crucial settings were lost. Managing these devices so they were always ready to operate as originally configured proved to be a formidable challenge.

NMI also needed a way to update the software on the devices without dragging them all back to the office, stacking them next to an active synch console and reloading them that way.

NMI found the remedy to its management nightmare in the Afaria frontline management solution. Once NMI deployed the Afaria client on all of its Pocket PCs and began using it to deploy and support its mobile applications the problem was solved. From that point forward, software and settings were always in order and at the ready so NMI could demo applications at any time.



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According to NMI Director, Dr. Scott Shamp, “Our focus at the New Media Institute is on applications and content. We’re not terribly interested in infrastructure and we don’t want to have to devote a lot of time to managing the infrastructure and devices. Now we can focus on understanding how mobile media can be used to enrich people’s lives and stimulate economic development and growth. It’s given us the confidence to tackle bigger projects and more projects because we know we don’t have to deal with the mundane aspects of managing the delivery mechanisms. Likewise, users can enjoy the benefits of the technology without having to think about it.”

### Benefits

By creating a free, urban wireless network infrastructure and numerous innovative mobile media applications, NMI has been able to successfully pursue its mission of exploring the changing relationship between people and information.

To date, its applications have demonstrated the social, informational and commercial benefits available through the innovative use of mobile technology, which should inspire and drive other groups and individuals to pursue further innovative applications.

NMI has also shown that it is possible to deploy advanced technology in a manner that does not require end-users to possess special knowledge to avail themselves of it.

### The Importance of Technology

By definition, the NMI’s activities are technology-based and –driven. Without mobile technology, there would not likely be a New Media Institute as it currently exists and functions.

### Originality

According to Intel, the WAGZone was the first municipal wireless initiative in the United States. But for the New Media Institute, the infrastructure was only a means to an end. The original purpose of this project was to explore the ways that mobile media can play a positive role in people’s lives. To meet this goal, infrastructure wasn’t enough. Innovative mobile media and wireless applications actually running in an operational wireless zone in a mixed-use environment would show us what mobile media can and should do. Although many communities have developed wireless initiative since the WAGZone was launched, the New Media Institute project is the first with the goal of creating a real-world research test-bed for future mobile media applications.

### Success

Gauging the success of an exploratory project is always difficult. Part of your success, part of any successful research initiative, is learning what won’t work. But there are several concrete indications that indicate the wireless content initiatives of the New Media Institute have been a success.

Since the WAGZone went live in December, 2002, it has been operational for all but 17 days. For a community-based initiative with limited volunteer technical support, this would have to



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be termed a success. Over 2700 individuals have become users of The Cloud software system running on the WAGZone. In a town with just over 100,000 people, this is a significant adoption rate.

Concerning the main goal of developing leading edge mobile media and wireless applications, the New Media Institute has created over 26 different content systems that have been showcased for over 1,200 people in a variety of different forums.

The most important criterion of success when developing prototypes is whether they work. They did. For each project Afaria guaranteed that student development teams could focus on the application itself, not managing the device. Freedom from the critical but mundane tasks of software updates, checking settings, and maintaining uniform software suites across hundreds of wireless devices allowed the students to focus on the most important objective – creating innovative applications.

### Difficulty

In terms of our furthering our mobile media prototype development initiative, some things were hard and others were very easy. The gradual realization of the importance of device management was painful. We lost a great deal of time coping with the idiosyncrasies of mobile devices. But after we realized that we needed a system that would handle these important tasks, our prototype development has gone much smoother.

The WAGZone is a great example of why we believe that small to medium-sized municipalities will lead the way in city-wide wireless initiatives. When the WAGZone was presented to the Athens-Clarke County Unified Government it was approved with an unanimous show of hands. Politics are different in a smaller community where relationships are well understood and past performance is well known. The University of Georgia and Athens-Clarke County have a tremendous record of cooperation. So it wasn't difficult to gain approval, but the trust placed in the ability to deliver on the promise of the WAGZone added a great deal of pressure.