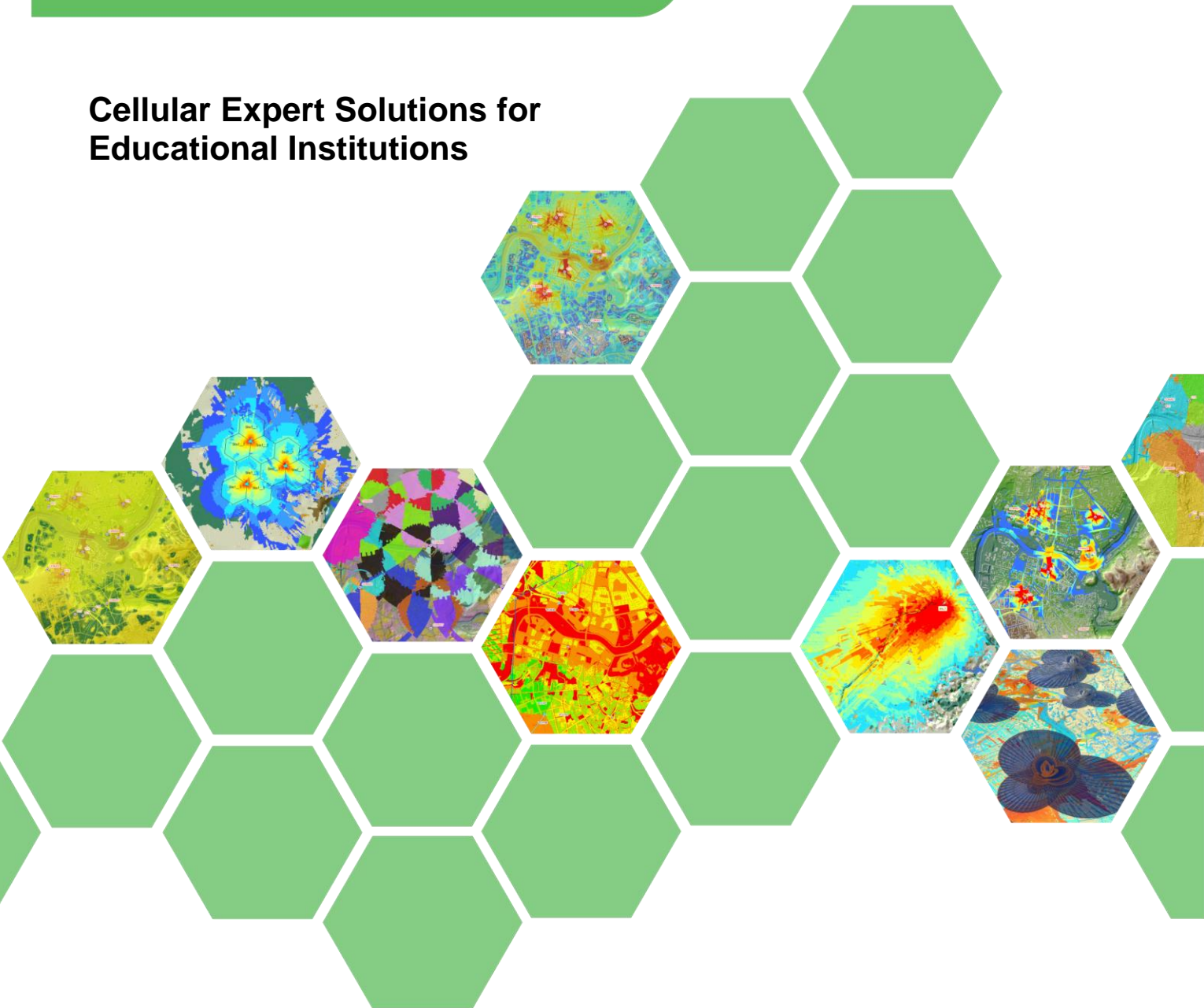


# CASE STUDY

## Cellular Expert Solutions for Educational Institutions





## Ball State University pioneers Cellular Expert

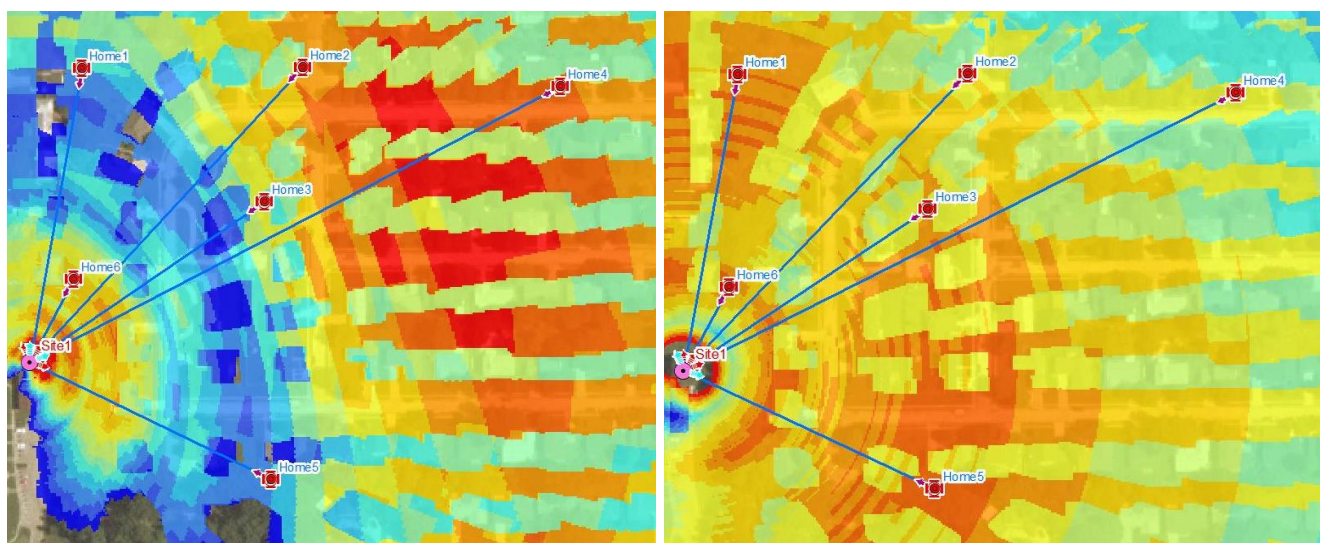
### About the company

Ball State University (Muncie, USA) is the third largest public University in Indiana. Ball State University offers a wealth of academic opportunities, including about 180 undergraduate majors and professional programs, and more than 100 master's and doctoral degrees. The University's programs in architecture, telecommunications, landscape architecture, education, entrepreneurship, and online master's degree in nursing are consistently ranked among the best in the nation. More than 90 percent of classes are taught by professors. That's almost unheard of at an institution of Ball State's size.

### Project scope:

The project has started in 2005 and lasted for one year. Ball State University has acquired 2 Cellular Expert licenses. After several years the company has acquired one more Cellular Expert license.

The goal of the project called "Digital Middletown" was to plan and build wireless network connecting students' households to the university network allowing students to attend virtual classes and communicate with teachers and friends straight from their houses.

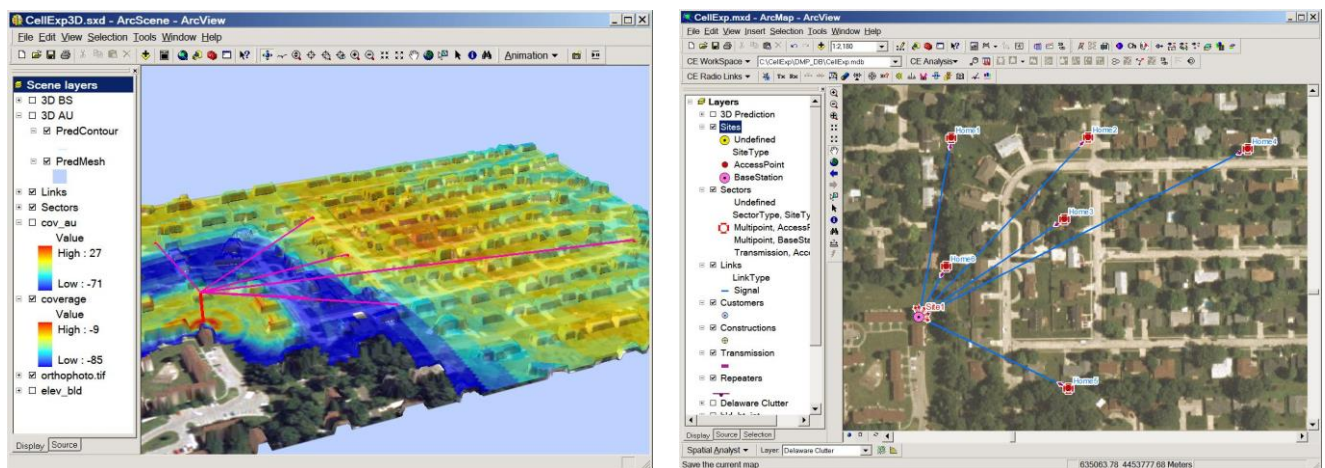


During the project the experiments with a variety of delivery models and new media concepts were carried out. In order to make their technology work, university researchers began exploring methods to measure the strength of their wireless



signals and how the contours of the land would affect the reception of those signals in various parts of the target neighborhood. Cellular Expert was chosen as radio-signal planning software to implement these tasks. At the time of implementation of Cellular Expert, Ball State University was the only academic institution in the country to have this software.

The technology used to connect the central University site to remote sites was WiMAX. Local distribution of WiFi signal from the remote sites was performed in order to reach end-users.



### Business value:

This project was beneficial not just for academic, but also for business sector. Information, generated by Ball State's models, helps to build communication towers that offer the best and most reliable coverage for the greatest number of people. It can help pinpoint potential trouble spots, facilitate highly targeted marketing by indicating which residents in an area can receive service and which cannot. The project has attracted Telecom giant Verizon which first has recognized the benefits of the project, as did such wireless broadband providers as Digital Bridge Communications and Omnicity.

*Note: This case study is adapted and reprinted with permission by Ball State University from the original article, "Mapping a New Company – From Digital Middletown to Afterimage GIS" written by Steve Kaelble.*

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