

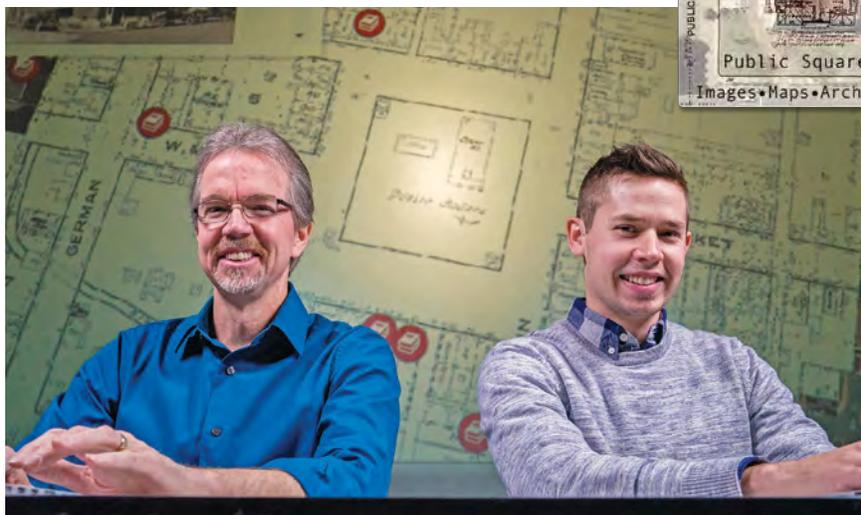
Layering the past and present

Interactive mapping tool offers communities a valuable historical resource **BY JANET SMITH ('81)**

Two JMU men with a keen interest in digital technology—one a historian and the other a geographic information science specialist—are developing an affordable, interactive mapping tool to make access to historical resources more open to the public.

“It’s our ‘small-d’ democratic approach,” history professor Kevin Borg says of “Spatial History in the Public Square: Maps, Images, & Archives in the Community.” He and Bradley Andrick ('14), GIS coordinator in Facilities Management, are championing the tool as an alternative to complicated GIS and mapping programs. Spatial history, Borg explains, is his discipline’s combination of historians’ questions and the analytical capabilities of geospatial technology and computers.

The online resource shows maps of Harrisonburg, Virginia, past and present. Supported by a \$4,000 grant from the Virginia Foundation for the Humanities, Borg and Andrick have “stitched” together modern satellite imagery and historical Sanborn maps, which were risk-evaluation resources for the U.S. fire insurance industry beginning in 1867. Users can fade and zoom between detailed maps of the city from 1886, 1912 and 1930 that can be overlaid on contemporary views of the region to see clearly the geographic changes in the city within the last century.



History professor Kevin Borg (left) and Bradley Andrick ('14), GIS coordinator in JMU Facilities Management, have developed an interactive mapping tool to facilitate the sharing of community historical resources.





1886

This screen grab from "Spatial History in the Public Square" overlays a map of downtown Harrisonburg from 1886 (gray box) on a modern satellite image of the city.

Historical photographs, printable PDF articles, links to research papers and other resources enrich the map layers by adding the stories of earlier Harrisonburg residents, businesses and buildings.

Throughout their work on the Harrisonburg project, Borg and Andrick prized a goal of concurrently developing a technological framework that they could share with other entities interested in creating their own online spatial history resources. “Our goal was to make an interface useful to communities; one that was graphically clean, accessible, replicable and affordable,” Borg says. He and Andrick visualize people at community museums, historical societies and other similar organizations building sites to share their groups’ own unique collections with the world.

“About \$100 will start a site,” says Andrick, who applied his GIS education and experience at JMU to match more user-friendly—and often less expensive—software and other technology to the project. “You don’t have to be a GIS cartographer to

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JMU history professor

build a site when using the interface we’ve piloted,” he says.

Representatives of two local historical groups are already interested in the possibilities the Harrisonburg site and its technological framework offer. Robin Lyttle of the Shenandoah Valley Black Heritage Project and Dale MacAllister of the Harrisonburg-Rockingham Historical Society contrib-

uted photographs, newspaper articles and other resources to “Spatial History in the Public Square.”

“The project has opened us up to a new way of looking at this history and how to preserve it,” says Lyttle, who envisions her organization using the expertise Borg and Andrick are willing to share. “Our [current] website has been designed to share our research and that of other historians,” she says. “The Spatial History project is a perfect example of how these kinds of collaborations are a ‘win-win’ for all.”

“The society would certainly use the technology at our museum,” MacAllister says. “Modern students and millennials definitely appreciate interactive displays that pique their interest—in this case in local history.”

“The goal when Brad and I began this project was to strip down the workings and make a resource as elegant and usable as possible,” Borg says. “I believe we have figured out a process and can now share it with others.”

40-YEAR HISTORICAL SNAPSHOT OF HARRISONBURG

Sanborn maps were published beginning in 1867 as risk-evaluation resources for the U.S. fire insurance industry. Community information such as population, water quality and firefighting capabilities were noted.

1886

Population: 3500
No Steam & 2 Hand Engines
Independent Horse-Cars
Water Facilities: Abundant
One Hook & Ladder Co.
Prevailing Winds N.W.

1912

Population 5300, Prevailing Winds, West.
WATER FACILITIES
Gravity system of water works, power by city. Original system installed in 1887. Water supply from mountain streams. Dam located 2 1/2 miles west of city. All city supply taken to town. Reservoir in use. Capacity 10,000,000 gallons. One pipe to reservoir, main pipe a pressure of 10 lbs. of water. One line of water pipe to each house. In double and 24 single hydrants. Average daily consumption 1,000,000 gallons.

FIRE DEPARTMENT
1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 20th, 21st, 22nd, 23rd, 24th, 25th, 26th, 27th, 28th, 29th, 30th, 31st, 32nd, 33rd, 34th, 35th, 36th, 37th, 38th, 39th, 40th, 41st, 42nd, 43rd, 44th, 45th, 46th, 47th, 48th, 49th, 50th, 51st, 52nd, 53rd, 54th, 55th, 56th, 57th, 58th, 59th, 60th, 61st, 62nd, 63rd, 64th, 65th, 66th, 67th, 68th, 69th, 70th, 71st, 72nd, 73rd, 74th, 75th, 76th, 77th, 78th, 79th, 80th, 81st, 82nd, 83rd, 84th, 85th, 86th, 87th, 88th, 89th, 90th, 91st, 92nd, 93rd, 94th, 95th, 96th, 97th, 98th, 99th, 100th.

1930

Population 7,194
Prevailing Winds: North and West.
WATER FACILITIES
Gravity and direct pressure systems (1880s). Reservoir system capacity 2 reservoirs, capacity 15,000,000 and 10,000,000 gallons. Each reservoir, installed 1887. One from mountain, other from dam and has pressure of 70 lbs. Reservoir depth 20 miles of 10, 15, and 65' reservoir. 150 miles double and triple hydrants. Average daily consumption 1,000,000 gallons.

FIRE DEPARTMENT
Fully equipped three-shift system to service 2,000,000 gallons of water. 1 paid man on duty on each of the 2 stations.