

210 CITIES PAINT THEIR FUTURE WITH GIS

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The Northeastern Illinois Planning Commission (NIPC) has completed what is believed to be the largest interactive use of GIS for regional planning ever conducted in the country. NIPC is the regional planning agency for metropolitan Chicago and the surrounding six counties containing a total of 272 municipalities. One of NIPC's primary responsibilities is maintaining a 30-year growth forecast that underpins regional transportation investments and other infrastructure planning. NIPC has a unique tradition of bottom-up, collaborative forecasting using in-person consultations in each of the affected 272 cities. These are critical sessions where local officials and NIPC staff share development information and preferences for growth boundaries and future land-use patterns.

In the past, this process was accomplished manually with participants drawing on paper maps that were converted into population and employment estimates for eventual reconciliation with regional forecast totals. Although this approach was solidly grounded in local collaboration, it's manual nature was cumbersome, inefficient, and prone to error. That's when NIPC decided it needed an interactive GIS tool that could be taken to local meetings and used on-the-fly to capture stakeholder spatial inputs. To fulfill those specifications, NIPC selected the INDEX planning support system offered by Criterion Planners/Engineers of Portland, Oregon.

A custom version of INDEX called Paint the Town was created as an ArcView 3.2 extension. NIPC has used ArcInfo and ArcView for over a decade in managing and disseminating regional information, so putting Paint the Town in place as an ArcView extension was a natural fit with its GIS activities. According to Ron Thomas, NIPC's executive director, "We've been an ESRI user for many years at the regional scale, and we knew that the technology was becoming more portable and interactive, so it was a natural choice for our process."

Paint the Town is designed as an interactive tool allows users to draw growth boundaries and "paint" land-uses on-the-fly during public meetings. As areas are painted, the tool simultaneously calculates new households and jobs that are being added to a community. Painting is accomplished with a "palette" of land-uses that offer different choices of development style and intensity. Over the past year, "painting sessions" have been held with 210 of the region's 272 municipalities where local officials were able to use a touch-sensitive screen to literally draw and paint their preferred growth scenarios. The objective is as much freedom and creativity as possible for the user within the bounds of standard GIS functions and data.

At the conclusion of the outreach meetings, NIPC staff have a comprehensive digital record that can be left with local officials and analyzed further at NIPC. Ultimately, individual community scenarios are aggregated into the multi-county growth forecast. “This is a great example of a relatively simple piece of technology making a world of difference in an important job for hundreds of communities,” says Thomas. NIPC staff have been able to accomplish the outreach meetings with a two-person team, one laptop running Paint the Town, and about two or three hours of time with the local officials. The initial round of sessions using the ArcView 3.2 version of Paint the Town provided operating experience and enhancement ideas for a subsequent ArcGIS 8.3 version that was recently completed.

In evaluating lessons learned thus far, NIPC has demonstrated that a GIS-based explanation of forecast information and on-the-fly scenario creation by non-technical local officials is not only feasible, but equally important as an engaging technique for interagency collaboration. NIPC believes the process improved information gathering about local expectations and aspirations, and helped build credibility for forecasts and NIPC generally. The positive experience of participants has led 45 of the communities to ask for their own copy of Paint the Town, and NIPC is expanding its use of the tool into its regional planning and local technical assistance programs.