



Bringing maps to the masses

Channel Seven and Yahoo!7

Discover how a major media network used GIS technology to provide Australians with a new level of insight into the 2013 Federal election.

Project overview ⊕

For Channel Seven and Yahoo!7 – Australia’s leading free-to-air network and top rated news service – the 2013 Federal election represented an opportunity to reinvent traditional political news coverage.

In partnership with Esri Australia’s Hosted Services division and Professional Services team, Channel Seven and Yahoo!7 used cutting-edge Geographic Information System (GIS) technology to create the 2013 Federal Election Map.

A true Australian media first, the ground-breaking Election Map project saw: the development of a behind-the-scenes producer application which powered a touchscreen broadcast display; and, an online intelligent map.

The solution mapped and analysed datasets from a variety of sources, including a real-time geo-located Twitter stream, and transformed the information into a user-friendly map that provided in-depth analysis on a range of socio-demographic issues.

As well as providing a compelling point of difference from other media groups, the Election Map enabled the network to generate news that was highly engaging and relevant to their viewers. The tools also provided reporters and producers with a unique, analytical vantage point to the election, so they could undertake research into key issues in a way not previously possible.

As Channel Seven and Yahoo!7 had no prior GIS experience or infrastructure, the solution was delivered as a hosted service – which saw Esri Australia cover every aspect of the development, implementation and maintenance of the applications.



Channel Seven and Yahoo!7 in focus:

The second-largest network in the country in terms of population reach, Channel Seven has commercial stations in each metropolitan city and across regional Queensland – as well as affiliates in Victoria, New South Wales and Western Australia that broadcast its content.

Channel Seven’s online partner, Yahoo!7, boasts one of the nation’s most successful internet platforms.

Like all free-to-air television networks, Channel Seven suspends normal programming every three years to cover the Federal election campaign and, in particular, election night: one of Australia’s most anticipated and highly competitive national broadcasting events.

With reporters on the ground in the country’s key political battlefields and expert commentators and presenters in the studio collating the results, the scope of Channel Seven’s election night coverage is second only to the Olympics.

Yahoo!7 supports Channel Seven’s coverage with a designated election homepage, which comprises relevant news articles, videos and interactive multi-media applications. ⊕

“The solution delivered us with incredibly precise and reliable information – which is essential when delivering a news event of this scale and importance.”

Stuart Wallace, Seven News Election Producer

“With GIS technology, we’ve put meaningful, relevant information into the hands of viewers, as well as added a powerful geographic context to the conversations happening on Twitter.”

Stuart Wallace, Seven News Election Producer



...▷ The challenge:

In a bid to break new ground in its coverage of the 2013 Federal election, Channel Seven sought a compelling and decisive point of difference that would engage viewers and provide a competitive edge over rival stations.

Meeting with Esri Australia’s Professional Services team, Channel Seven requested a technology solution that would provide an interactive and visually appealing element to their election night broadcast; as well as engage viewers throughout the broader election campaign via Yahoo!7.

Specifically, they required:

- + The capability to map and analyse data from sources such as the Australian Bureau of Statistics, Australian Electoral Commission, Hometrack and Twitter – to provide demographic insights into each electorate.
- + An interactive, touchscreen map suitable for presenters to use live on-air – powered by a producer application that gives off-air content managers control over what stories are broadcast.
- + A user-friendly online version of the map that provides Channel Seven viewers with a ‘second screen experience’, and Yahoo!7 users with heightened access to information.
- + All maps to align with the station’s brand and style guidelines, and be visually optimised for television broadcast – to ensure viewers can instantly and easily interpret the data.
- + A complete solution that included application development, implementation and ongoing management – as well as data, technology infrastructure and training.
- + Secure and stable applications that would remain fast and reliable at the peak of usage – whether it was the broadcast tool being used during the live election coverage; or an online map receiving thousands of hits simultaneously.
- + Guidance and training to ensure producers, researchers and reporters were comfortable using the technology, ensuring faultless delivery on the night.

The solution:

Esri Australia’s Professional Services and Hosted Services divisions worked closely with Channel Seven and Yahoo!7’s election producers and graphics departments to craft an Australian-first solution.

The solution was developed using a suite of industry-leading Commercial-Off-The-Shelf (COTS) technologies, including Esri’s ArcGIS platform and the Amazon Cloud.

As Channel Seven didn’t have the necessary infrastructure and in-house GIS technology skills required for the project, the Election Map solution was delivered as a hosted GIS service, entirely managed by Esri Australia.

The solution comprised two main components:

Broadcast tool

The broadcast tool featured two elements: a producer application; and an interactive display application.

The producer application allowed election night producers to research, select, control and queue stories for broadcast; which then featured on the ‘interactive display’ driven by the presenter via the Microsoft Perceptive Pixel touchscreen.

Online tool

The online version of the Election Map – embedded into the Yahoo!7 website as an iFrame – was an interactive web application that served two users: reporters at Channel Seven; and the public.

For reporters, the online Election Map was used to provide compelling insights into the geo-demographics of an electorate and predict where stories would unfold. For the broader public, the online Election Map provided a second screen experience for viewers and complemented the station’s primary election coverage.

The innovations:

To meet Channel Seven and Yahoo!7’s unique requirements and create mapping tools suitable for mass public consumption, a number of new technical innovations were developed during the project.

Construction of a tailor-made Tweet harvester

To achieve maximum viewer interaction, a program was created to ‘harvest’ updates from Twitter based on hashtags or keywords included in the Tweet. The Tweets were then geo-located in real-time on both the online map and the broadcast map. A Twitter ‘hashtag cloud’ search engine was devised to automatically update the map to show trending election-related topics.

Development of a touchscreen map for broadcast

To enable presenters to conduct live on-air research, a first-of-its-kind touchscreen application was designed for broadcast use. Using a Microsoft Perceptive Pixel – a fast, interactive touchscreen display – the presenter was able to swiftly move between multiple sources of data, zoom in on electorates of interest and include comments submitted by viewers via Twitter. A unique ‘5 in Focus’ tool enabled viewers to gauge where their electorates sat in relation to a variety of socio-demographic benchmarks such as mortgage stress, employment, internet access, education levels and house prices.

Creation of a user-friendly producer application

To ensure Channel Seven maintained full control over the on-air segments, the producer application was developed to give election night producers the power to select, control and queue stories to feature on the interactive display driven by the presenter. This was a particularly important requirement when selecting Tweets appropriate for broadcast. As the presenters and producers had little or no knowledge of GIS technology, complex workflow programming was simplified to a single button click.

The outcomes: ⊕

- ⊕ **Point of difference.** GIS technology provided Channel Seven with an original and accurate intelligent mapping experience, delivered through a visually appealing and user-friendly interface. Through the successful delivery of this project, Channel Seven pioneered an Australian television first – and had a notable competitive edge over rival networks.
- ⊕ **Increased efficiencies.** The Election Map provided the Seven News team – and the broader public through the Yahoo!7 website – with instant access to critical data. Seven News Election Producer Stuart Wallace said: “With just one click, we could bring up relevant information about an electorate – which previously would have involved hours of research and digging through databases.”
- ⊕ **Unique geographic insight.** Through mapping and analysing real-time Twitter commentary and authoritative data sources, GIS technology revealed key insights into electorates that would have otherwise gone unnoticed.
- ⊕ **Heightened viewer engagement.** The constant stream of real-time ‘geo-located’ Tweets enabled Channel Seven and Yahoo!7 to innovatively engage and hold their viewers. Likewise, providing easy access to relevant information about specific electorates gave viewers a new level of localised insight.
- ⊕ **Seamless project delivery.** Election Maps was delivered as a hosted GIS solution, and saw the Esri Australia team: provide all datasets; oversee technology licence requirements; develop the applications; manage the design of the user interfaces; host and monitor the applications in the Amazon Cloud; provide business analysts; and, deliver on-site training and technical support. “The entire project was seamlessly delivered without the need for on-premise technology or any of our own technical staff – which really freed up our resources and meant we could focus our efforts elsewhere,” said Mr Wallace.
- ⊕ **Stable and secure.** The Election Map was locally hosted on the Amazon Cloud, ensuring the map was reliable, responsive and always performed to an optimal level, regardless of the number of users accessing the site. “During the election broadcast, the online map was attracting more than 2,000 new visitors an hour. This level of viewer engagement also extended to how users interacted with the map, with the average time spent on the site hitting 23 minutes at one point,” said Mr Wallace.
- ⊕ **Rapid delivery.** The solution was developed and implemented within one month. This was achieved despite the unpredictable timing of the election and unexpected challenges that inevitably emerge during a pioneering project.

▶ Solution mix:

- ⊕ **Development team incorporating:
Esri Australia’s Hosted Services
and Professional Services;
and JSAcreative**
- ⊕ **ArcGIS Server JavaScript API**
- ⊕ **ArcGIS Runtime SDK for WPF**
- ⊕ **Microsoft SQL Server RDBMS**
- ⊕ **Microsoft Visual Studio built
UI/Animation WPF XAML**
- ⊕ **Python**
- ⊕ **MapData Services’ Hometrack
data, Australian Bureau of
Statistics 2011 Census data; and
Australian Electoral Commission
2010 results.**

“GIS technology provided us with a significant advantage over other networks. We had the most cutting-edge intelligent mapping experience for viewers which delivered an unrivalled level of insight into election issues.”

Stuart Wallace, Seven News Election Producer

Discover the value Esri Australia’s GIS technology solutions will deliver to your organisation.
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