



NSW ATLAS - Building a GIS Application for the Facebook Generation

ESRI UC 2011 International User Conference

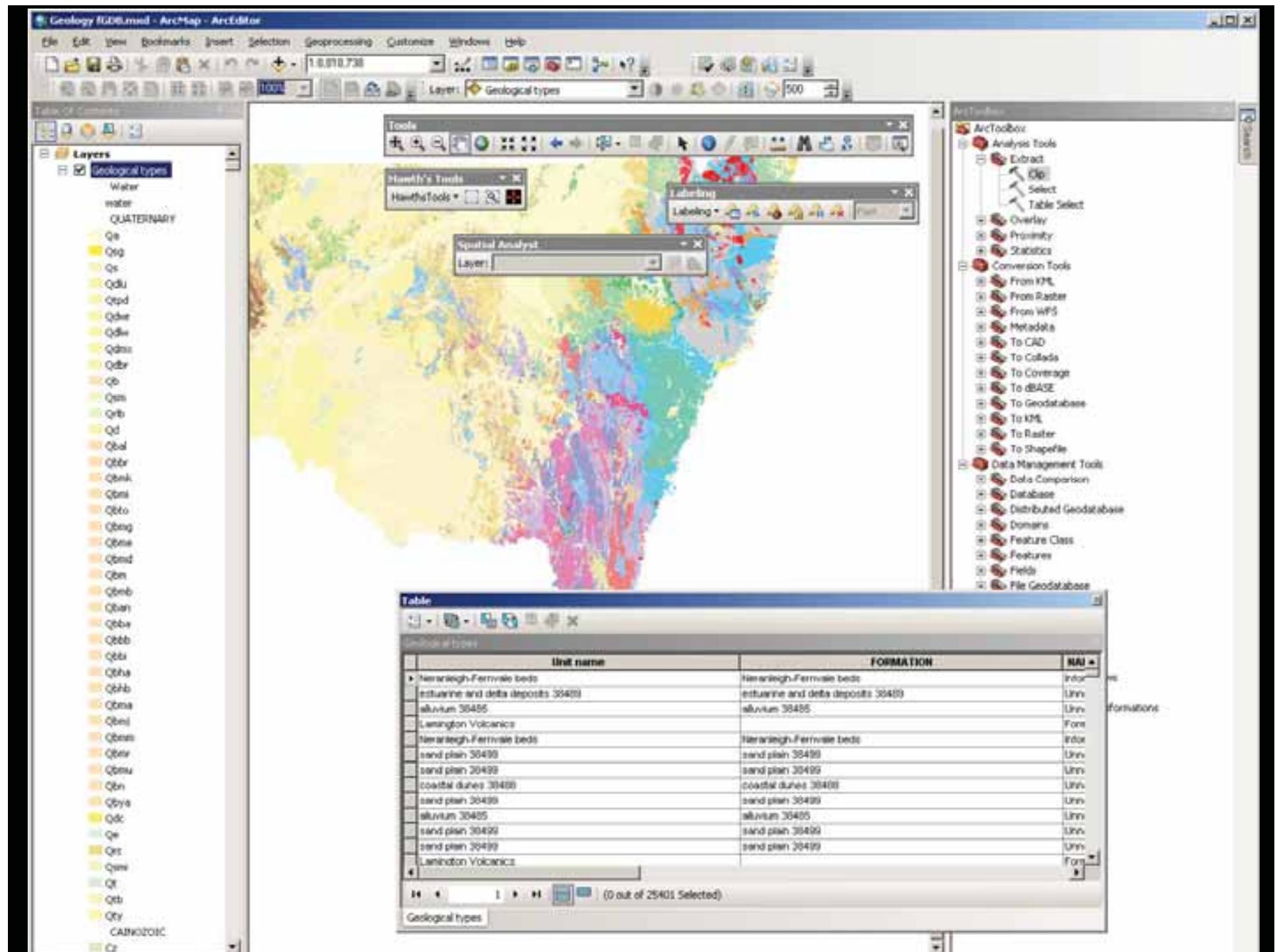
San Diego, 11th – 15th July 2011



Presentation Overview

- Online Challenges for GIS Development Today
- GIS for the FaceBook Generation
 - Vector Caches, JavaScript API
 - Mobile and iPad, Notification Services
- SIX WEB 2.0 – Live Demonstrations
 - SIX ‘Alpha’ Viewer
 - LPMA Cache Services
 - LPMA Mobile

GIS development today



The screenshot shows the Microsoft Visual Studio IDE interface with the following components visible:

- Solution Explorer**: Shows the solution structure with two projects: "FacilityFinder" (containing "My Project", "App.xaml", "FacilityFinder_Map.xaml", "FacilityFinder_Map.xaml.vb", " MainPage.xaml", and "MainPage.xaml.vb") and "FacilityFinder.Web" (containing "My Project", "ClientBin" (with "FacilityFinder.xap"), "Silverlight.js", "FacilityFinderTestPage.aspx", and "FacilityFinderTestPage.html").
- Properties**: The properties for "FacilityFinder_Map.xaml.vb" are displayed, including sections for Advanced, Build Action, Copy to Output Directory, Custom Tool, Custom Tool Namespace, Misc, File Name, and Full Path.
- Output**: An empty output window showing the message "Show output from:".
- Code Editor**: The "FacilityFinder_Map.xaml.vb" file is open, showing VB code for handling mouse moves and radio button clicks. The code includes logic for hit testing, setting extent, and reporting coordinates.

```
FacilityFinder_Map.xaml.vb X FacilityFinder_Map.xaml
FacilityFinder_Map
MyMap_MouseMove

End If
Else
    MyMap.IsHitTestVisible = True
    _newExtent = True
End If
End Sub
Private Sub MyMap_MouseMove(ByVal sender As Object, ByVal args As System.Windows.Input.MouseEventHandler)
    'Report mouse coordinates
    If MyMap.Extent IsNot Nothing Then
        Dim screenPoint As System.Windows.Point = argsGetPosition(MyMap)
        'ScreenCoordsTextBlock.Text = String.Format("Screen Coords: X = {0}, Y = {1}", screenPoint.X, screenPoint.Y)

        Dim mapPoint As ESRI.ArcGIS.Client.Geometry.MapPoint = MyMap.ScreenToMap(screenPoint)
        MapCoordsTextBlock.Text = String.Format("Map Coords: X = {0}, Y = {1}", Math.Round(mapPoint.X, 2), Math.Round(mapPoint.Y, 2))
    End If
End Sub
Private Sub RadioButton_Click(ByVal sender As Object, ByVal e As RoutedEventArgs) ...
```

*GIS for the
facebook®
generation*

the atlas

of New South Wales

second edition



Aboriginal Heritage

Aboriginal culture is more than beliefs and laws, it's a living culture, linked to the whole environment – plants, animals and landscape.

The New South Wales landscape is full of Aboriginal history – as well as connection to the past. Aboriginal places can include sacred locations, dreamtime stories and traditions just that essential that individuals and communities have adopted that the past and wish to continue for current and future generations.

Aboriginal people have lived in this environment as long as for at least 65,000 years. Many places around the state date the presence of Aboriginal occupation back to 10,000, and are significant to Aboriginal communities today. There are approximately 150 Aboriginal groups, but small, scattered, spiritual, historical, and administrative entities. Aboriginal people have deep spiritual and emotional ties to Country.

There are over 30,000 known Aboriginal sites in NSW. These range from large, formal centres of social activity in the form of rock art, to smaller, more subtle signs of ancient habitation such as burial grounds, middens, ground scarps, quarries and modified trees. Distinct elements of the environment, including what seems most typically human-made features, such as walls or fences, plantings, rock art, traps, whitelash bark 'barkings' that have retained markings and values, forms of fire places, native Aboriginal people often have extensive knowledge of their environment in the shape of maps made by the past 170,000 years.



Aboriginal rock art, from Biripi country

In Native Areas, camps and Aboriginal Reserve Settlements

Aboriginal values are reflected in the landscape, including but not limited to trees and rocks, popular tracks, strong waterfalls and tracks, open places and dense forests.

The bushlands and environments are associated with stories and cultural knowledge that is still passed on today.

Aboriginal communities vary by location. Aboriginal heritage is the context of the entire landscape, rather than focusing on a single archaeological artefact, place or opportunity to move away from a linear approach. Encouraging the individual mould and people's cultural connections to their traditional and broader landscapes creates the idea of collective landscapes so that all parts of the landscape are alive with cultural meaning, that all landscapes contain the depths of human life, and that human and ecological diversity is interconnected. Aboriginal landscapes approach landscape management recognising that Aboriginal people have continued to look after areas of the landscape for past and present uses and meanings.

Aboriginal people are often recognise the cultural values of biodiversity and the environment. Rivers, streams and mountains form an integral part of attachment to the land and its site. Plants and animals are valued as part of Country, and many sites are spiritual.

The continued use of natural resources in bushland indicates to know the cultural resource use. This practice shows Aboriginal communities to give us cultural knowledge, stories and customs, places of cultural value, and to teach their延续ing. The health of a community and the land is central to Aboriginal heritage.



history and exploration

The story of New South Wales

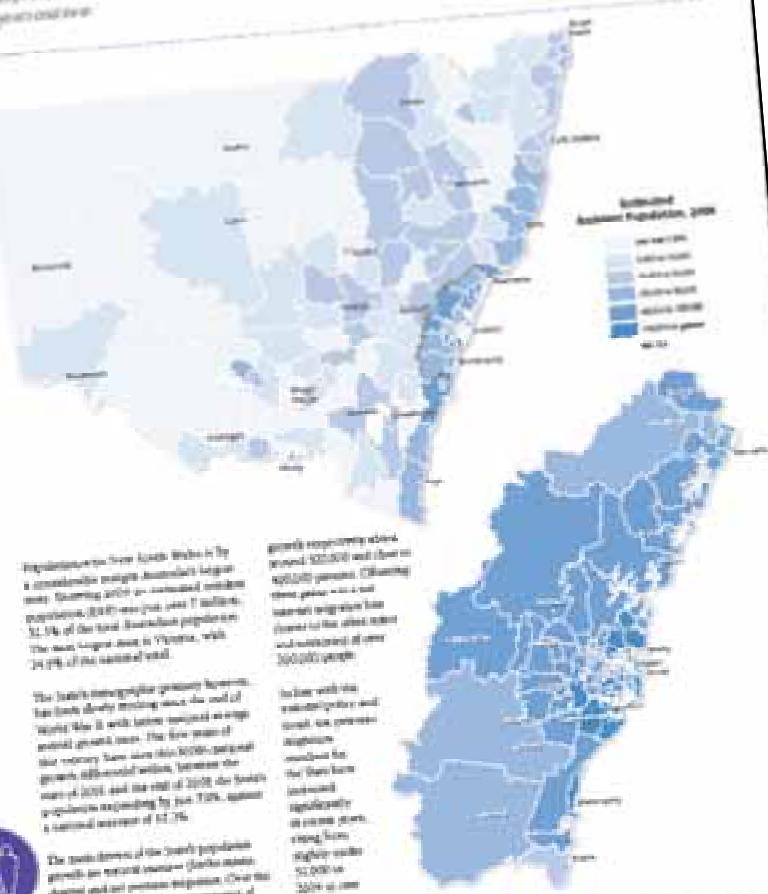
Colonial period
1788-1850
The First Fleet arrived in 1788, establishing a penal colony. Aboriginal people were forced to leave their lands and live in reserves. They resisted and fought against colonisation, leading to conflict and loss of land and lives. The colonial period saw the establishment of towns and cities, and the development of agriculture and industry. Aboriginal people were marginalised and their way of life was disrupted.



Aboriginal Cultural Landscape Atlas
A resource for a better understanding, appreciation and celebration of Aboriginal culture and history in New South Wales.
Legend:
• Aboriginal group
• Traditional area of continuing administration or control
• Indigenous historic site camp or reserve
• Indigenous group resource use or recent place

Population

By 2050 the median age in the State is projected to be 49 years, with one in five of the State's residents aged 65 years and over.



population was from India, made it the most numerous foreign population, (18.8%) even over 7 million.
The next largest area is Vietnam, with
1.9% of the national total.

The last decadal average suggests that there should continue to be a small upward trend between measured average ground rates. The first stage of this recovery has seen this 2006-2007 growth, differentiated written, insurance fee earned 2007, and the end of 2008, the funds' growth is now standing by 10.7%, against a nominal increase of 11.7%.

The main drivers of the spatial population growth are natural increase (higher natural death and net positive migration). Over the past 20 years there has been a movement of

74,000 to 2008 shows significant growth.
Approximately 30% of the total national
annual progress goals.

The annual mean negative log-likelihoods for groups 2003–04 to 2006–07 ranged from below –20.000 to –32.000. While three groups of that type in 2003 showed three generations of their sons in Queensland, with another three in each of the other states and territories.

At the 2000 Census 4.7% of the population identified as being of indigenous origin. This was 30.4% of the intended national indigenous population.

and very little percentage production is for hybrid as a whole in some countries (Bulgaria, Romania, Poland, etc.). Analysis of 2000-02 figures of the FAO [18] also shows that the country has been lost in annual

Typical
start
of
incubation
Phase
III
typical
responses
and can
tolerance

Mr. Miller
Mr. Smith
Mr. Johnson
Mr. Jones
Miss Murphy

*• Buildings and their users
• Sustainability and
our built environment
and lifestyle and how*

dimensions in minutes and not just two charge fractions in the solution fluid.

Over one million people now speak 30% of the English/American sign language dialects. In general the largest losses have occurred in the north.

of the Best: Heading the committee were John Lewis (Central Banking, Management and Justice).

right and Jennifer Rule, all of whom have been very thoughtful and helpful throughout our stay. Many thanks to all of you who have made our stay here so wonderful.

have been negligible and extremely difficult to measure. A number of long-term studies have been undertaken. These, together with those from previous research, indicate that both *Parthenocissus* and *Glycine* hybrids have also been relatively successful in the USA, as has the matching *Glycine* varieties. At least enough have been comparatively small and so there are signs that studies have now begun.

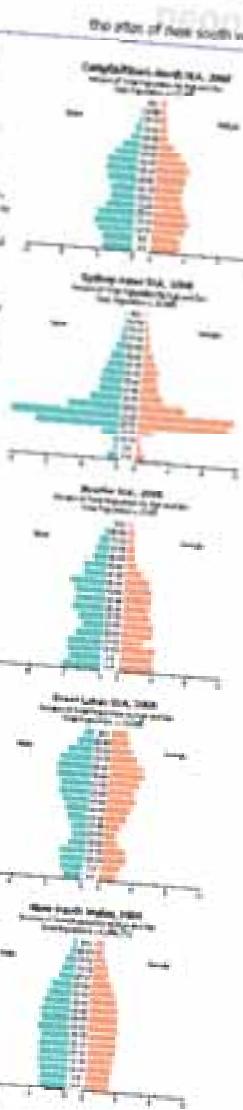
relative contributions of traffic and
pedestrian use. Integration of pedestrian
use may have other benefits. In some

theoretical models have shown that a positive growth gradient leads to a rapid spread of traits. For example, Cello (1995) has demonstrated that population growth, while generally slow, can increase rapidly if a species invades a new area with favourable conditions and no or few native competitors. In addition, a number of recent large studies have shown that populations of a range of Great Lakes benthic invertebrates have increased in abundance and/or the key driving force in all these changes is climate.

are often significantly more expensive than other forms of care, and other consequences may arise. In a population, significantly more people may be privately employed in a single department of service, and, before applying the test of minimum efficient scale,

median age of 10.0 years, significantly higher than the age of 9.9 years. Females aged over 10 years 11.0% of the time compared with 11.1% for males.

"problems in the New Age" (1912), with a section on "The 'Older' in China," both reflecting his interest in Chinese culture.



“make an online version”

IBM WebSphere

ArcGIS Server

Deliver in 3 months

Inputs

Book

HTML exports

photos

charts

tables

GIS

shapefiles

rasters

Excel tables

Adobe Illustrator

ATLAS of NEW SOUTH WALES^{BETA}



Land & Property
Management Authority

Explore and learn

Uncover ancient Aboriginal culture and the early European explorers. Learn about modern-day agriculture and our environment. Discover the people who live in New South Wales, and what makes them tick.

Q Search the Atlas

Topics



Economy



Elections



Environment



History



People

ATLAS EXPLORER ⓘ

Navigate around NSW and explore maps of Population, Agriculture, Elections, Crime, History and more.

START EXPLORING ➔

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Under the covers

ArcGIS Server 10.0 with JavaScript API v2.3

- feature layers
- time-aware layers
- cached layers
- intuitive geocoding

[CHANGE MAP](#)

Population Discover the people of New South Wales

[ABOUT THIS MAP](#)

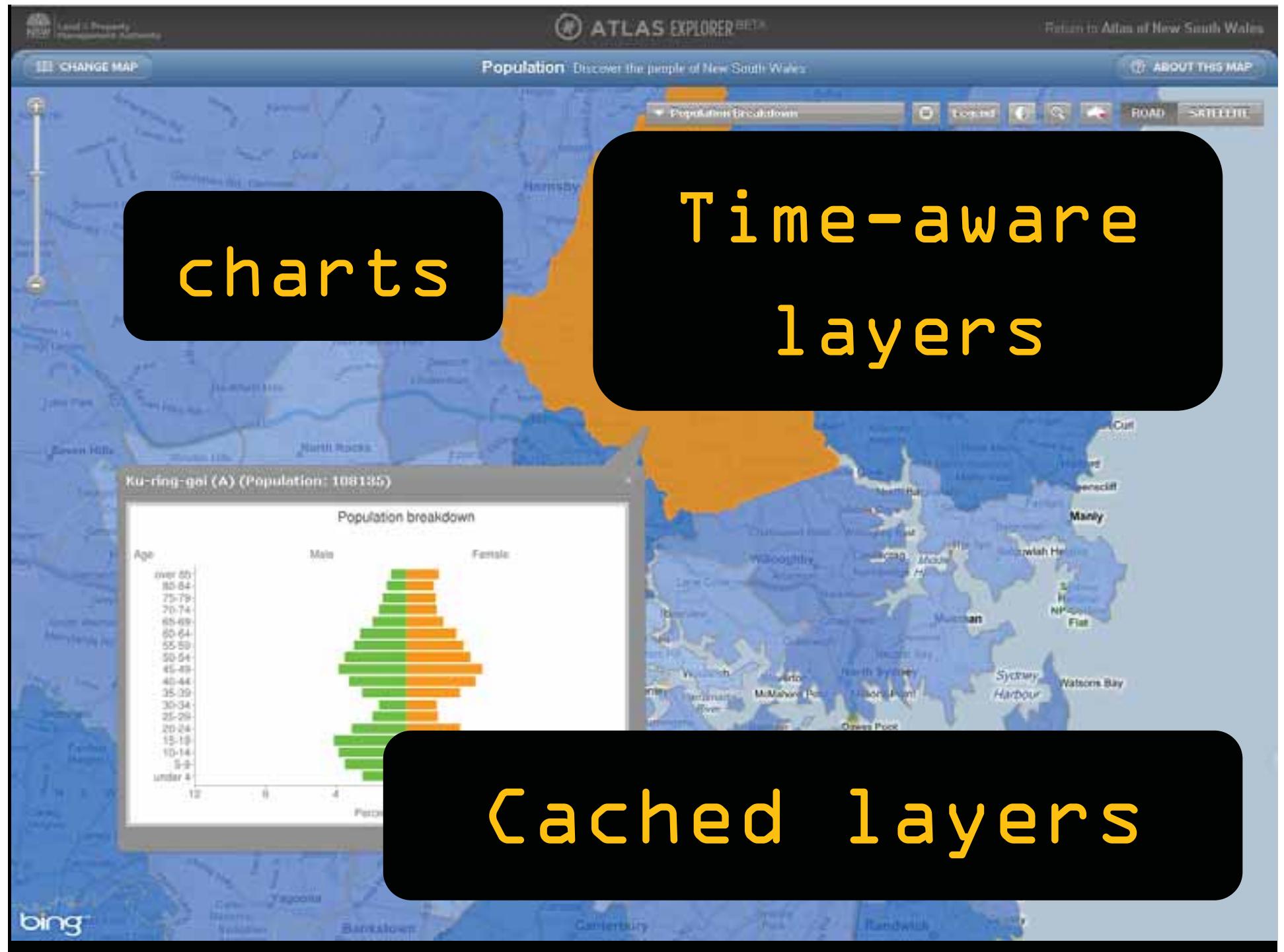
navigation as a
behaviour of the map

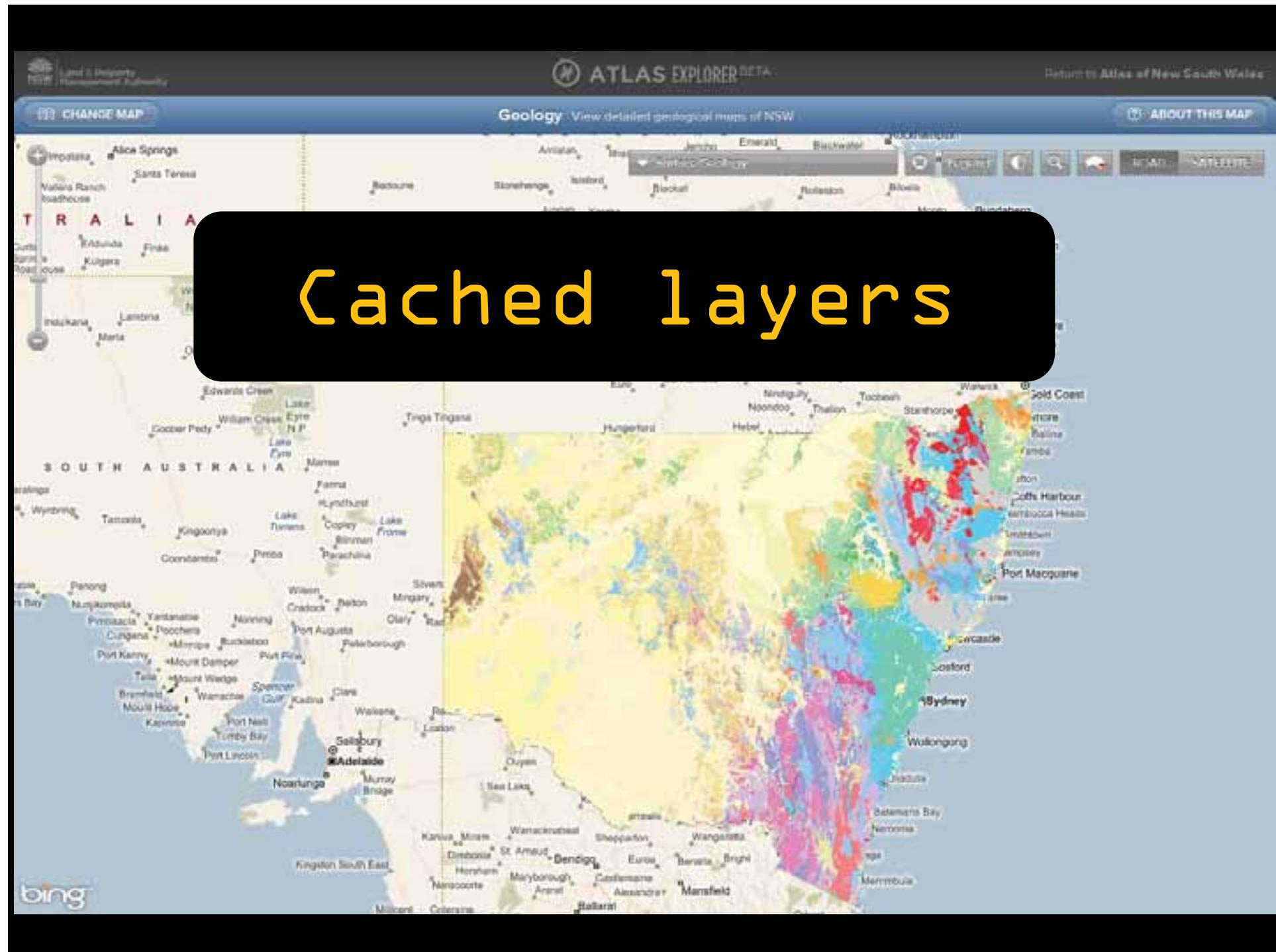
Identify as a
behaviour of the layer

feature layers

[CHANGE MAP](#)**Population** Discover the people of New South Wales[ABOUT THIS MAP](#)

```
newLayer.onMouseOverHandler = dojo.connect(newLayer, "onMouseOver", function (evt) {  
    map.setCursor("pointer");  
    map.graphics.remove(highlightGraphic);  
    highlightGraphic = new esri.Graphic(evt.graphic.geometry,highlightSymbol);  
    map.graphics.add(highlightGraphic);  
});  
  
newLayer.onMouseOutHandler = dojo.connect(newLayer, "onMouseOut", function () {  
    map.setCursor("default");  
    map.graphics.remove(highlightGraphic);  
});
```





related article

intro & summary

legend (live/png)

chart/table/iframe

1..n layers

infoWindow size

offset, fields...

layer type

```
  },
  "related": [
    {
      "name": "[name of topic] //appears as [topic name]",
      "mapId": "[unique map id]",
      "title": "[title of map] //appears as main title on map",
      "article": {
        "title": "[title of article] //appear in about this map",
        "intro": "[article intro] //appears in title",
        "summary": "[article summary] //appears in about this map",
        "link": "[url path to related article]"
      }
    }
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  "themes": [
    {
      "title": "[theme title] //appears in sub layer dropdown",
      "legend": {
        "title": "[legend title]",
        "description": "[legend description]"
      }
    }
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  "layers": [
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      "chart": {
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        "object": "[html element] //used in infowindow",
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          "width": "[infowindow width]"
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    {
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      "opacity": "[initial opacity value]",
      "url": "[map REST end point path]",
      "fields": "[list of associated map fields]",
      "type": "[dynamic|feature|cluster]",
      "offset": "[maxAllowableOffset]"
    }
  ]
}
```

Flexibility

- Add new layers instantly
- Support multiple layer types
 - Link to article, or not

Extensibility

- Add new objects easily
(chart, table, iframe...)

Summary

ArcGIS Server 10.0 with JavaScript API v2.3

time-aware layers

feature layers

cached layers

intuitive geocoding

Summary

500 Mb of text, photos, tables

3.5 Gb of GIS data

~3 months from start to finish

atlas · nsw · gov
· au



@AtlasOfNSW