





Background

In 2008 I first saw a demonstration of ESRI'S Cadastral Editor and was mildly impressed.

Members of the GIS Section at Parramatta City Council realised the potential of a single point of truth viz:

- Benefits in accuracies of the cadastre matching the aerial photos.
- Benefits with data input for parcels only occurring once and in one

file.

 All sections of Council would benefit from the sharing of knowledge.

In 2009 Council bought 3 licences of the Cadastral Editor.

In June 2009 Jason Grech of GVIZ, was given the task of migrating the data to a Geodatabase for use in Cadastral Editor.

In July 2009 we had staff trained and implementation began.

The Council started working with Cadastral Editor in September 2009 and found that it is really an empty Geodatabase .

EMPTY CADASTRAL FABRIC FABRIC Figure A represents the cadastral fabric after data migration to a Geodatadase.

Why is it empty?

- •The source data which was used to create a Geodatabase is not based on survey information and huge errors occur in many lines. These errors are too big and do not conform to the least square adjustment rules, so the least square fails. Hence all lots need to be entered manually.
- •Natural features such as river parcels are large complex shapes, that when adjusted lines cross over themselves (self intersecting) and the adjustment fails. The river parcels are therefore required to be made smaller by creating new parcels.
- •Simple curved boundaries which are poly lines before they are data migrated, become hundreds of short lines, making all curved boundaries useless. If a least square adjustment is performed on these shapes, we have similar calculations, as river parcels, however, the shape may just change to an irregular poly line. The solution is to delete and re-enter the proper data.

The benefits are:

- As poorly coordinated areas are improved by data entry and least square adjustment, the surrounding areas are also improved.
- •With coordination of various Government Departments the raw data input and output can be shared and a reduction of cost in data entry.
- •The start of a Register of Surveying Marks in Council.
- •The methodology in collating the data identifies unidentified parcels, steps in boundaries and errors that were copied from original charting maps. At this stage it was clear that the program could be made into a functional system for use in our Council.

Why data migrate?

- •A blank screen would not serve Council's day to day business needs.
- •A Geodatabase gives one more step toward intelligence and sharing knowledge, so we have one.

Conclusion

Only six months have passed with the implementation of a development Cadastral Editor to maintain Councils Cadastral Fabric.

During this time, improvements have been made in the Cadastral Fabric, parcel shapes and spatial position. Council has decided that this system of coordinating the cadastre in the long run will benefit Council immensely.