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@UTHORITY v.6

Mapping Integration - Overview

NOTICE

Revision History

Date	Version No.	Author	Description
21 February 2005	1.0	Annabel Mackay	Initial Revision
21 July 2005	1.1	Annabel Mackay	Updates to product and company names
01 October 2009	2.0	Tony Singh	Updated new template

1.   Table of Contents

2. Introduction

The **AUTHORITY** textual information system and **AUTHORITY** database can be integrated with a spatial or graphical information system such as GIS or CAD software.

This document describes the functionality that integration provides, the software required in **AUTHORITY** and the mapping system to enable integration and ancillary tasks required for integration.

AUTHORITY 5.0 uses the specification described in this document.

Audience

This document is for use by those requiring an introduction to integration between **AUTHORITY** and spatial information systems.

Symbols/Terminology

Mapping system	The spatial information system, graphical information system, GIS or CAD system
AUTHORITY Link	A collective name for the software in the mapping system that enables integration with **AUTHORITY**

3. Functionality

3.1 Display Properties on Map

Records can be selected in a range of **AUTHORITY** programs and the properties attached to the records displayed on a map in the mapping system.

For example, an **AUTHORITY** Development Application could be displayed in an **AUTHORITY Application Enquiry** program and the parcels attached to the application, including affected neighbour parcels, sent to the mapping system for display on a map.

AUTHORITY modules with this functionality include:

- Animals
- Applications
- Assets
- Certificates
- Customer Service Requests
- Registers
- Property
- Rates
- Water Billing
- Work Orders

3.2 Display Properties in AUTHORITY

Properties can be selected on a map in the mapping system and **AUTHORITY** records related to the properties displayed in a range of **AUTHORITY** programs.

For example, a property could be selected on a map and the matching **AUTHORITY** property record displayed in the **AUTHORITY Customer Service Property Enquiry** program providing an entry point to all other **AUTHORITY** records relating to the property (e.g. Applications, Rates, etc.).

AUTHORITY modules with this functionality include:

- Animals
- Applications
- Assets
- Certificates
- Customer Service Requests
- Registers
- Property

- Rates

3.3   Neighbour Notifications

The combination of functions in **AUTHORITY** and the mapping system enable Neighbour Notifications to be processed.

The neighbour notification process involves 2 functions:

1. Neighbour Parcel Linking

   In **AUTHORITY**, links can be created between applications and properties to show:

   - The properties for which an application is being submitted (ie. **include** parcels)

   - The properties that are affected by an application (ie. **neighbour** parcels)

   Typically, application-to-property links are entered individually using the **AUTHORITY Property Links** program. This process may involve consultation of hardcopy maps to identify affected properties, and where an application affects many properties this process may be time consuming.

   Mapping system software can be used to more easily identify affected properties, and after selecting affected properties in the mapping system, they can be sent to **AUTHORITY** to be linked to an application using an automated process.

2. Correspondence Production

   AUTHORITY includes functionality to create correspondence about **AUTHORITY Applications**. When correspondence documents created they are stored on Council's computer system and **AUTHORITY Desktop** document links are created between the **AUTHORITY Application** that the correspondence is about and the document file.

   The **Application** correspondence production process is initiated within **AUTHORITY** or MS Word for individual document requests, but where the same document is requested for multiple recipients, as in Neighbour Notifications, the correspondence production process is initiated from a mapping system.

3.4   Bulk Property Correspondence

AUTHORITY includes functionality to create correspondence about **AUTHORITY Properties**. When correspondence documents created they are stored on Council's computer system and **AUTHORITY Desktop** document links are created between the **AUTHORITY Property** that the correspondence is about and the document file.

The **Property** correspondence production process is initiated within **AUTHORITY** or MS Word for individual document requests, but where the same document is requested for multiple recipients the correspondence production process is initiated from a mapping system.

3.5   Property Bulk Update

AUTHORITY includes functionality to modify the same data for AUTHORITY property records in a bulk process. This is done using **AUTHORITY Property Bulk Update** (**i_pr079**) program.

Properties can be selected for bulk updated using a variety of methods including street name, land title, and attribute type. In addition to this a mapping system can be used to identify properties for update. After selecting the properties in the mapping system, the properties can be sent to **AUTHORITY** for input to the **Property Bulk Update** program.

Selection of properties for update in a mapping system could be useful in the following situations:

- Adding a flooding attribute to all properties within 100 metres of a river to indicate flood zone: a mapping system's buffer selection tool could be used to easily identify properties within this distance of a river.

- Adding a zoning attribute to all properties of a specific size to indicate building restrictions: a mapping system's size range selection tool could be used to easily identify properties between a minimum and maximum size.

4.   Software Requirements

4.1   AUTHORITY

AUTHORITY includes software for mapping system integration. No additional software development or installation is required to enable **AUTHORITY** for mapping system integration.

AUTHORITY's mapping integration software can be used with <u>any</u> mapping software.

4.2   Mapping System

Mapping systems do not include software for **AUTHORITY** integration. Additional software must be developed by a mapping vendor to enable the mapping system for **AUTHORITY** integration. The mapping vendor typically calls this software **AUTHORITY Link** and it becomes available as an Add-On or Plug-In to the base mapping system.

4.2.1 Integrated Mapping Systems

AUTHORITY Link software is available for the following products:

Base Mapping System	Desktop Product	Authority Link Vendor
Autodesk MapGuide	Autodesk MapGuide	Open Spatial
Cadcorp SIS	Cadcorp SIS	Integrated Facility Management
	ISS-SIS Enquiry	Integrated Facility Management
ESRI Product Suite	EView	ESRI
GenaMap	OMNIViewer	OMNILINK
	World Viewer	GenaWare
InfoMaster	InfoMasterGIS	InfoMaster
Latitude	Latitude	AusSoft
MapInfo	EasiEnquirer	MapInfo Australia & resellers
	EasiMaps	MapInfo Australia & resellers
	Exponare	MapInfo Australia
	IntraMaps	Digital Mapping Solutions
	MapInfo Professional	MapInfo Australia & resellers

4.2.2 Other Mapping Systems

Where integration is required to a mapping system not listed in the previous table, it is necessary for the mapping system vendor to develop **AUTHORITY Link** software for the mapping system.

Civica will liaise with the mapping system vendor to arrange for **AUTHORITY Link** software to be developed. Civica provide documentation and instruction to the mapping system vendor about how to develop the **AUTHORITY Link** software.

5. Other Requirements

All mapping software integration requires the following tasks to be completed:

- **AUTHORITY** database connectivity
  Integration requires database connectivity between the RDBMS into which data entered in **AUTHORITY** is stored and the mapping system. Where the mapping system is run on the MS Windows desktop this is usually achieved using ODBC. Where the mapping system is run on a different desktop (e.g. Unix) the method for database connectivity is usually mapping system specific and uses database server programs provided by the mapping system vendor.

- Property matching
  Integration requires a method to determine which properties in **AUTHORITY** represent which properties in the mapping system, and vice versa. Generally, the property identifier from one system is entered into the other system such that a permanent record of matching properties exists.

Civica do not provide services for either task. Generally, the mapping system vendor will provide these services and Civica provides technical assistance as required. Where the mapping system vendor does not provide such services Civica can refer Council to parties who do.

6.   Implementation

Civica arranges and project manages implementation of mapping integration upon request. Implementation is conducted in liaison with the **AUTHORITY Link** software vendor.

Implementation involves three components:

1. **AUTHORITY Link** software development (if required)

   Civica can arrange for the mapping system vendor to develop the AUTHORITY Link software.

   Civica Sales staff can liaise with the mapping system vendor to provide AUTHORITY Link software development costs.

2. **AUTHORITY** implementation

   Implementation of AUTHORITY's integration software involves simple system configuration and user training.

   Civica Sales staff can provide licence and implementation costs for AUTHORITY's integration software

3. **AUTHORITY Link** software implementation

   Implementation of the AUTHORITY Link software generally involves installation, configuration and user training.

   Civica Sales staff can liaise with the mapping system vendor to provide licence and implementation costs for the AUTHORITY Link software.

7.   Appendix – Database Query Functions

These functions do not require the **AUTHORITY** menu system to be running on the PC desktop at the same time as the mapping system, unlike the bi-directional functionality described in this document. Thus, they are discussed separately in this Appendix.

Database query functions are run in the mapping system and do not need **AUTHORITY** to be running at the same time. Database query functions are SQL queries to the **AUTHORITY** database. Commonly, SQL queries are run using a tool like **dbaccess**, **SQLPlus**, or **Crystal Reports**, the results of which are displayed in a textual, tabular format. When SQL queries are run from a mapping system the results of queries can be displayed graphically on a map, textually on a map, or textually in a designated window in the mapping system.

A range of database query functions may be provided as part of the mapping vendor's **AUTHORITY Link** software. In addition to these Council may create database query functions in the mapping system as required.

Thematic Mapping

Thematic mapping shades map features based on the value of attribute for each feature.

Database queries may be executed within the mapping system to produce thematic maps based on data in the **AUTHORITY** database. For example, maps showing the location of all parcels with registered dogs, heritage-listed buildings, or flood affectations.

A thematic map function may retrieve fixed data (e.g. display all parcels with animal registrations) or, may prompt the user for selection criteria (e.g. display only parcels with animals registered in the year entered by the user).

Map Labelling

Map labelling is used to print text information on map features.

Database queries may be executed within the mapping system to label maps with textual data from the **AUTHORITY** database. For example, to print owner, land title and zoning details for a selected parcel in the mapping system.

A map labelling function may display the label on the map near the object of interest or in a section of the mapping interface alongside the map.

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