

Dynamic Segmentation

No	ACCIDENTDA	ACCIDENTKE	ACCIDENTS	ACC_CLASS	ACC
101	5/3/2000	32722	3515	4	8
102	12/6/2000	33312	3517	4	18
103	12/6/2000	33312	3518	4	18
104	4/5/2000	32723	3516	5	16
105	1/21/2000	32161	3512	4	6

- Query Point and Line Events
- Point-on-Line Overlay
- Line-on-Line Overlay
- Add/Delete Events
- Edit/Relocate Events
- Buffer Around Events

Field	Value	Type
RS	502966	numeric (255,15)
RS_RoadId	374800	integer (4)
RS_BMP	0	numeric (255,15)

No	ACCIDENTDA	ACCIDENTKE	ACCIDENTS	ACC_CLASS	ACC_HOUR	ACC_TYPE	ADD_MILEAG	AREA	CITY	COLL_TYPE	COUNTY	DIR_XSECT	IMPACT
1	10/30/2000	33228	44	4	1	8	0	0	9	20	1	6	6
2	10/12/2000	33228	48	5	7	B	0	81	1	20	9	2	2

- Event location from database fields (mileposts)
- Line direction and endpoint markers
- Snap events to routes, arcs and other events
- Analyze event coincidence via overlay operations
- Write query/analysis data to client files
- Buffer queries for generation of notification mailing lists/labels
- Browser-based (MS IE, Netscape)
- Customizable symbols, screens and reports
- Graphic button interface
- Built on Autodesk MapGuide

Dynamic Segmentation

Introduction

Dynamic Segmentation provides an efficient means of storing and analyzing events that occur along a route system, such as highways, streets, railways and utility distribution networks. The route system is generated by relating adjacent line segments to one or more objects. For example, the route 'Trafalgar Rd' would consist of an ordered list of the arcs with that name. The location of point (eg. accident locations) and line events (eg. road stretches requiring repair) are referenced on the basis of their distance from the starting point of the route.

The advantage of Dynamic Segmentation is that it does not require breaking the underlying route objects into smaller pieces. Overlay analysis is also more readily accommodated through database manipulation.

The Hunter GIS Dynamic Segmentation for MapGuide (DSM) is a set of software components that enables point and line events related to an arc/node network to be queried and graphically displayed through Autodesk's MapGuide Server. Data sources include third party GIS products that provide Linear Referencing and Dynamic Segmentation. The interface provides the following capabilities:

- perform relational queries to view point and line events;
- point-on-line and line-on-line overlay;
- event location sourced from database fields (eg. Milepost);
- define screen display parameters: symbol type and size, line type and thickness, color, legend and label names, line direction arrows and endpoint markers;
- list database fields and road names to facilitate searches;
- add/relocate events on-screen;
- snap event location to routes, arcs and events;
- buffer queried events or generation of mailing lists/labels;
- customizable report listings;
- download query/analysis data to client files;
- browser-based (MS IE and Netscape);
- customizable symbols, screens and reports;
- graphical button interface.

The DSM utilizes Active Server pages (ASP), JavaScript, VBScript and the MapGuide Viewer API; there are only a few CGI programs. As a result, the system is largely accessible and customizable. By following the User's Guide and the comments embedded in the code, a qualified user can modify the code to meet specific agency requirements.