16_03 Automatic Design File Filters

Update:

Roadway CADD Support has introduced a Microstation VBA program to automatically select the applicable level filter based on the type of file you are opening. This automation reinforces our standard file naming convention and the file type entered through the Design File Generator program.

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TIP No. R2007	💌 Unit Roadway	Type: Design	Desc.:
	Create Directory		1

Note that the term "file type" used here is not The Industry Standard definition. All Microstation file is registered with a DGN extension. The System recognized this file type as a Microstation application. In terms of NCDOT standard file naming convention, file type is defined as the third set of character string in a standard Microstation file name. For example;

R2007_RDY_**XSC**_L.DGN

This is a Microstation cross section file base on the 'XSC' file type designation in the file name. This is important because the program will focus on the third set of character string and will only work if the standard naming convention has been used. Having said that the following table describes the correlation between NCDOT Roadway file type and the corresponding filter when opening Microstation files with MS_Start.

TYPE	FILTER		
DSN	DESIGN		
EOP	EOP		
EST	ESTIMATE		
PAT	PATTERN LINE		
PFL	PROFILE		
PHM	PUBLIC HEARING MAP		
ROW	ROW		
SHP	SUPERELEVATION		
SPD	SHEAR POINT DIAGRAM		
SS	SLOPE STAKE		
TYP	TYPICAL SECTION		
XPL	X-SECTION		
XSC	X-SECTION		

Here is a quick demonstration to show the advantages using this kind of automation.

Without automation (code name RD_SyncStart), when opening a shape file to create a Geopak shape, the number of available levels for Microstation and Geopak processes are over 727 levels.

727 of 727 displayed; 1 selected;

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U.S.	Filter: (none)	<u></u>
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Default	COGO Default Curve	🗸 o 🗖
	COGO Default Parcel	🗸 o 🗖
	Cogo Default Point CELL	✓ ○ □
	COGO Default Point Elevation	✓ ○ □
	COGO Default Point Number	✓ ○ 🗆
	COGO Default Spiral	🗸 o 🗖
	Copy of Prop XS Exc Horizontal Limits	🗸 o 🗖
	Default	✓ ○ □
	DTM Contours Major	
	DTM Contours Major Approximate	🗸 o 🗖
	DTM Contours Major Depression	🗸 o 🗖
	DTM Contours Major Text	🗸 o 📕
	DTM Contours Minor	🗸 o 🗖
	DTM Contours Minor Approximate	🗸 o 🗖
	DTM Contours Minor Depression	🖌 o 📕 星

With RD_SyncStart, when opening a shape file to create a Geopak shape, now the number of available levels for Microstation and Geopak processes has drastically dropped to only seven (7).

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⁹ rop Geopak I	Prop Geopak Pavement Shape Independent	1	0		
	Prop Superelevation Arrow CELL	1	0	1	
	Prop Superelevation Label	1	0	1	
	Prop XS Geopak Shape	1	0		
	Prop XS SE Bar Graph	1	0		
	Prop XS SE Text	1	0		

Note that once the file is opened, Designer can still select any filter desired. The main focus of Roadway CADD Support concern is to eliminate unnecessary levels while running Geopak processes. While most of Microstation processes are moving into an object oriented interface and putting less emphasis on levels, most of Geopak processes still require manual Designer input of levels. Reducing the number of levels with filters can help this cause and speed up plan production efficiency.