Extending Data-Driven Pages with .NET and ArcObjects

GeoDev Meetup - Freezing in Anchorage, AK

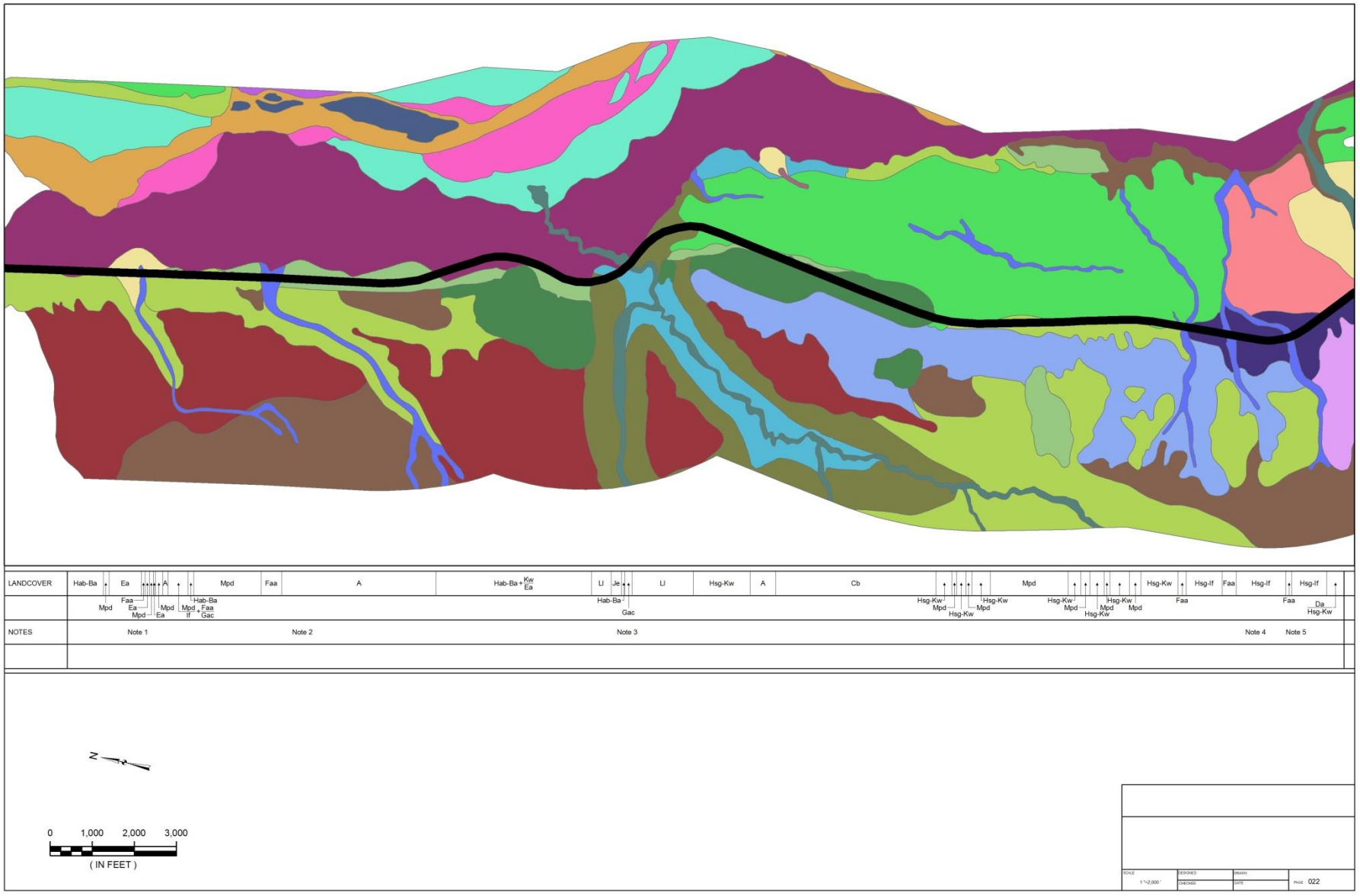
February 19th, 2015

David Howes, Ph.D.

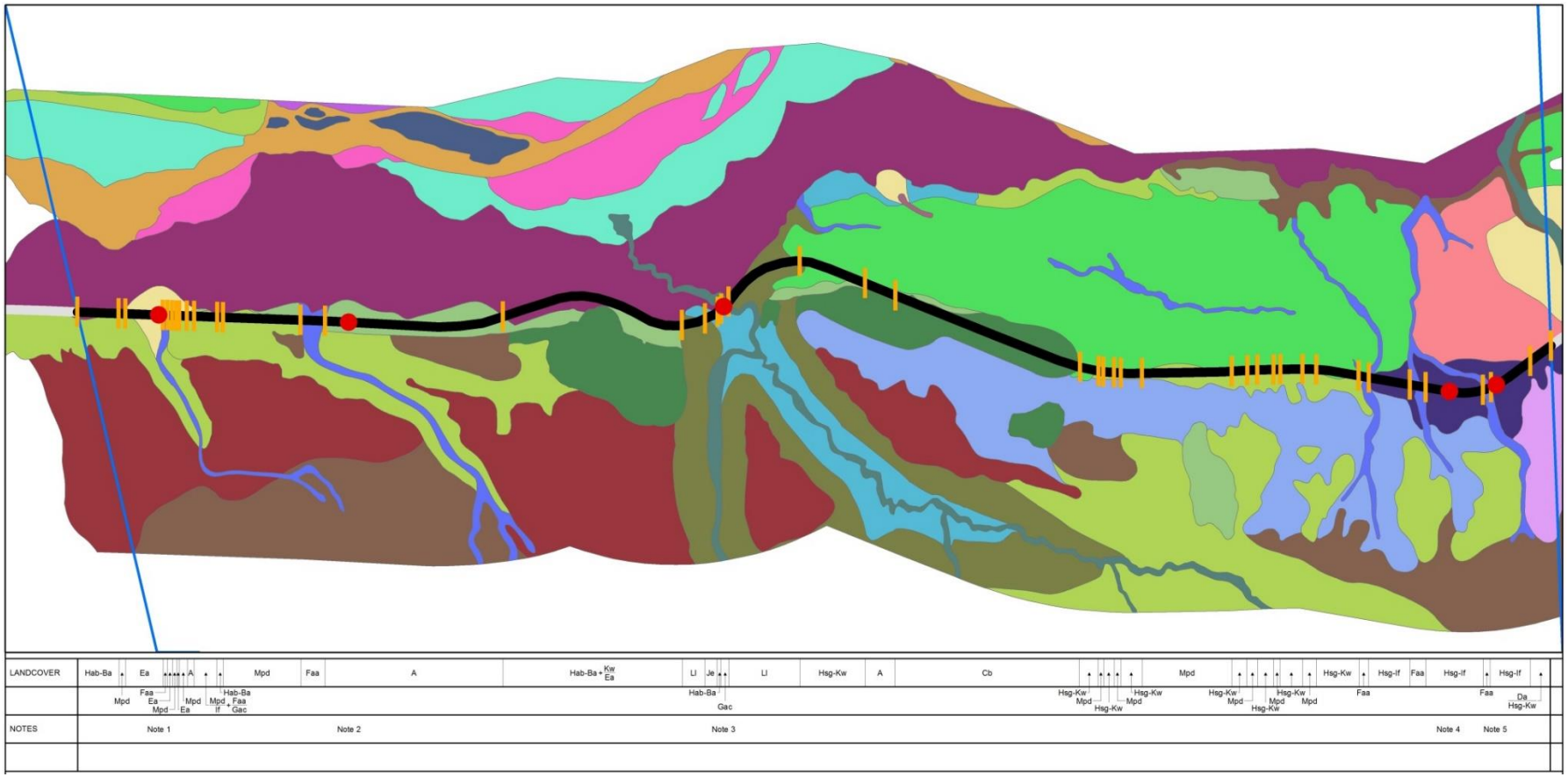
David Howes, LLC

dhowes.com

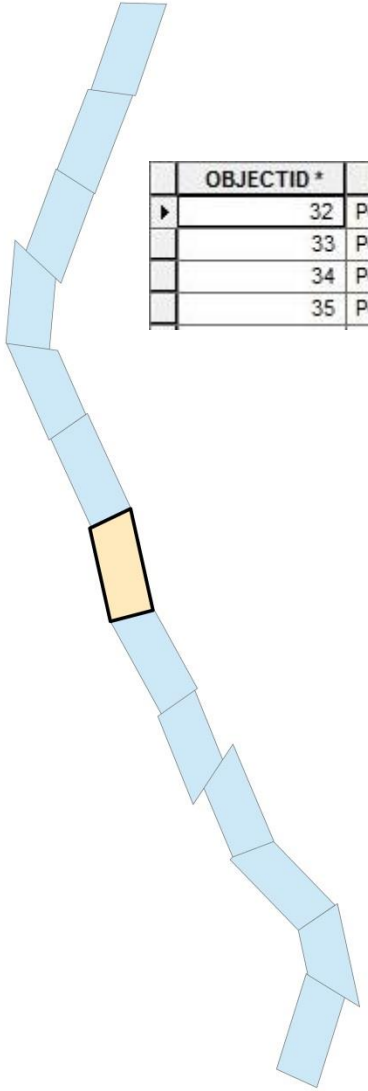
Task: Develop Map Series with Custom Figure



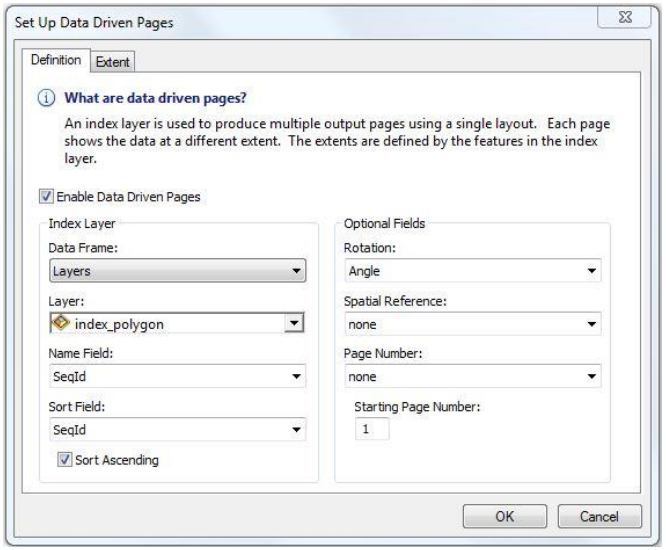
Tie Profile Bars & Labels to Linear Referencing



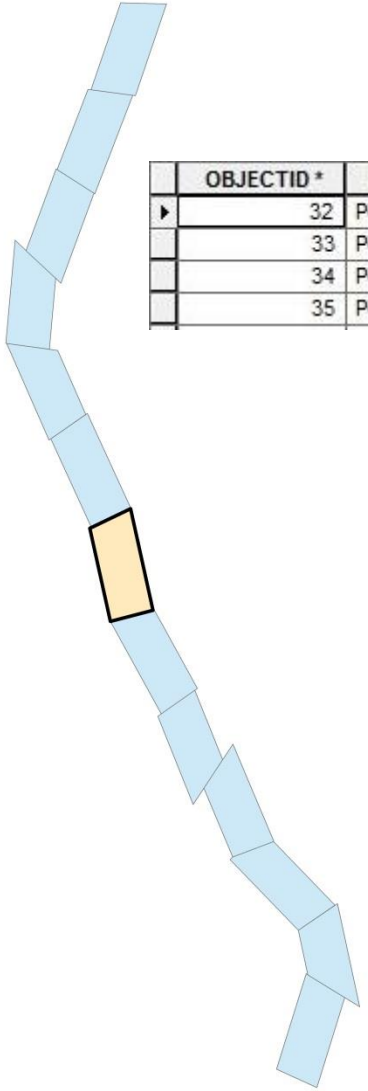
Start with Data-Driven Pages



	OBJECTID *	Shape *	PageNumber	GroupId	SeqId	Angle	Scale	PageLabel
▶	32	Polygon	27	1	27	107.22	24000	027
	33	Polygon	26	1	26	77.84	24000	026
	34	Polygon	25	1	25	45.97	24000	025
	35	Polygon	24	1	24	67.16	24000	024



Start with Data-Driven Pages



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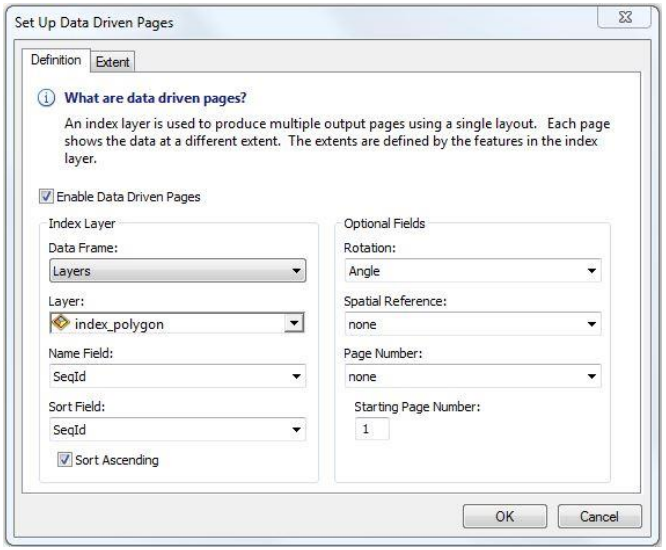
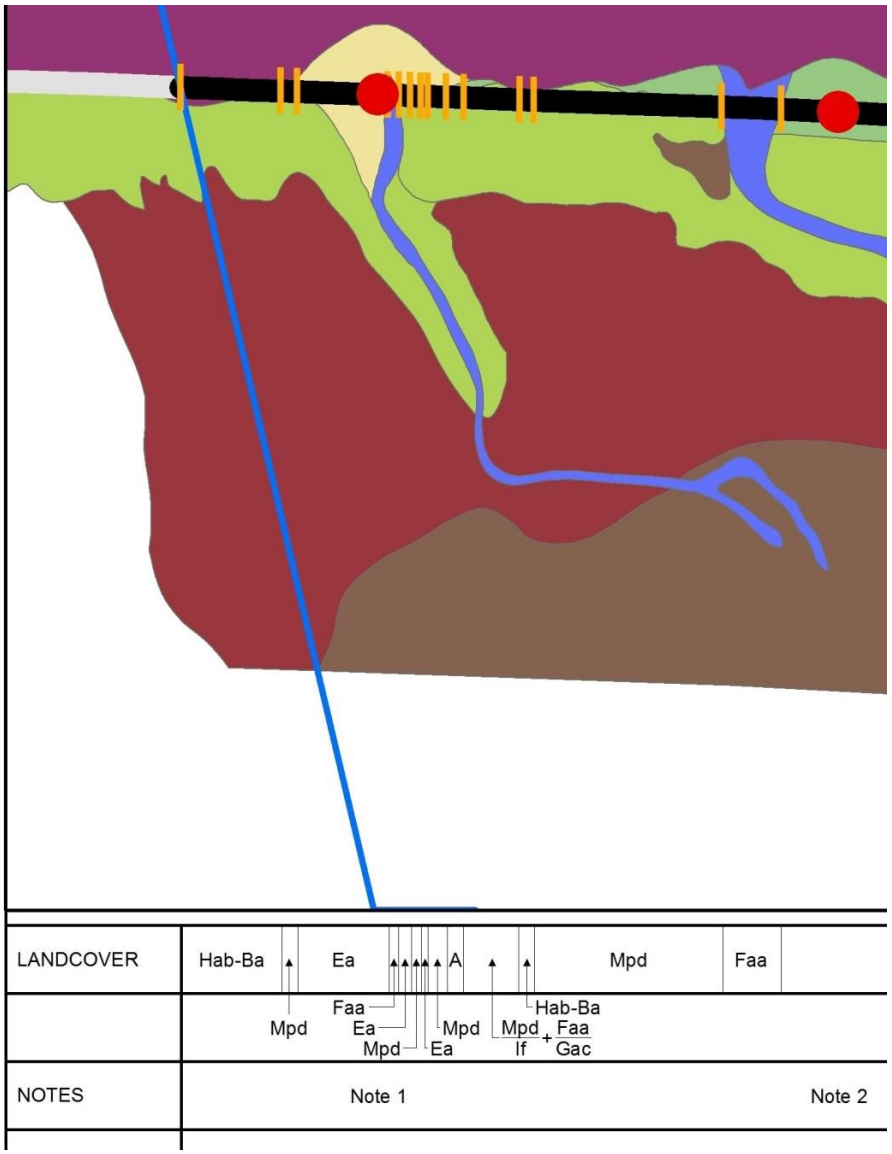
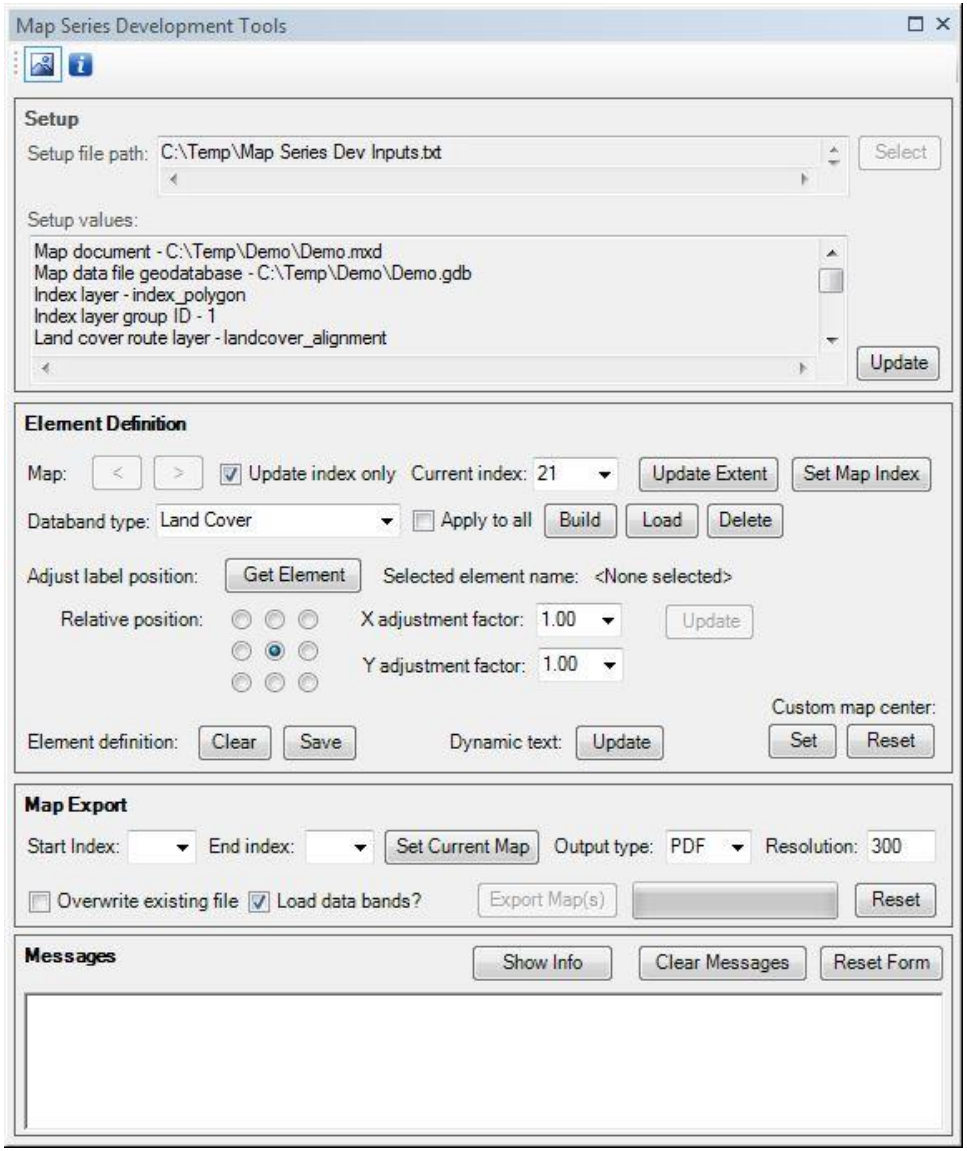


~~ArcPy - add/remove map elements~~

Create a .NET Add-In





Store Element Properties in a Table

MapElementDefinition

OBJECTID *	MapDocumentPath	IndexGroupID	IndexSeqID	ElementType	ElementName	PropertyName	PropertyValue	CreationDate
21313	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_LowerLabel_2	Text	Tn	5/2/2013 10:09:34 PM
21314	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_LowerLabel_2	ColorRGB	33554432	5/2/2013 10:09:34 PM
21315	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_LowerLabel_2	Size	6	5/2/2013 10:09:34 PM
21316	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_LowerLabel_2	PtX	14.9635999999991	5/2/2013 10:09:34 PM
21317	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_LowerLabel_2	PtY	3.5581000000002	5/2/2013 10:09:34 PM
21318	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_LowerLabel_2	HorizontalAlignment	esriTHACenter	5/2/2013 10:09:34 PM
21319	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_LowerLabel_2	VerticalAlignment	esriTVACenter	5/2/2013 10:09:34 PM
21320	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_LowerLabel_2	AnchorPoint	esriTopMidPoint	5/2/2013 10:09:34 PM
21321	C:\Temp\Demo\Demo.mxd	1	21	Line	DBD_LC_Line_2_LabelSeparator_2	ColorRGB	33554432	5/2/2013 10:09:34 PM
21322	C:\Temp\Demo\Demo.mxd	1	21	Line	DBD_LC_Line_2_LabelSeparator_2	Width	0.25	5/2/2013 10:09:34 PM
21323	C:\Temp\Demo\Demo.mxd	1	21	Line	DBD_LC_Line_2_LabelSeparator_2	FromPtX	14.7945999999993	5/2/2013 10:09:34 PM
21324	C:\Temp\Demo\Demo.mxd	1	21	Line	DBD_LC_Line_2_LabelSeparator_2	FromPtY	3.60310000000027	5/2/2013 10:09:34 PM
21325	C:\Temp\Demo\Demo.mxd	1	21	Line	DBD_LC_Line_2_LabelSeparator_2	ToPtX	15.1327000000001	5/2/2013 10:09:34 PM
21326	C:\Temp\Demo\Demo.mxd	1	21	Line	DBD_LC_Line_2_LabelSeparator_2	ToPtY	3.60310000000027	5/2/2013 10:09:34 PM
21327	C:\Temp\Demo\Demo.mxd	1	21	Line	DBD_LC_Line_2_LabelSeparator_2	AnchorPoint	esriCenterPoint	5/2/2013 10:09:34 PM
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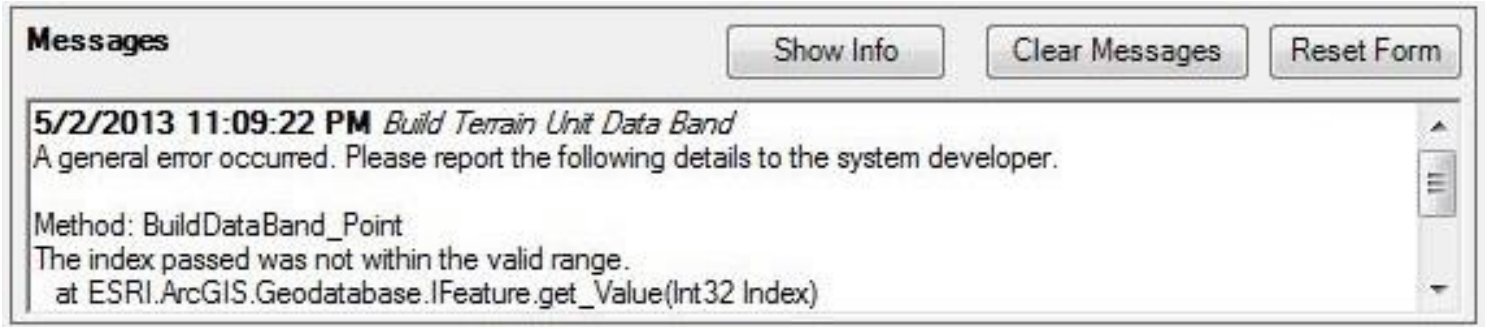
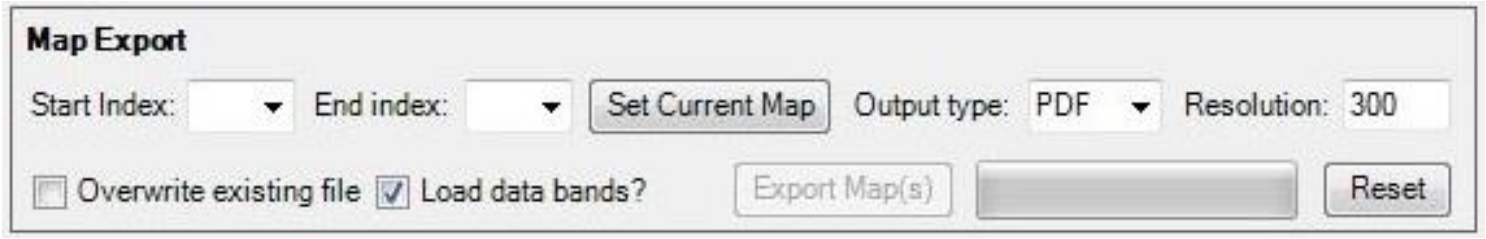
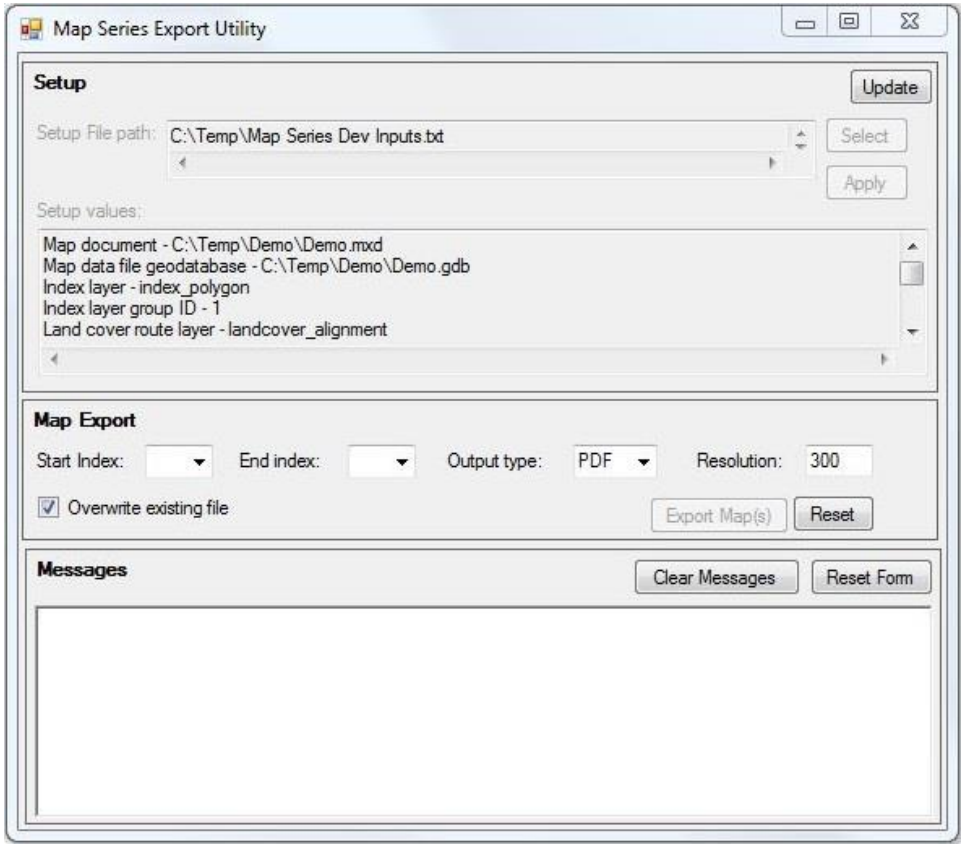
1 (0 out of 1095 Selected)

Use Clean Error Handling & Messaging



Run Export Process Outside ArcMap





Map export from within ArcMap:

2 minutes per map

Map export from outside ArcMap (same code):

2 seconds per map

Thanks for Coming