

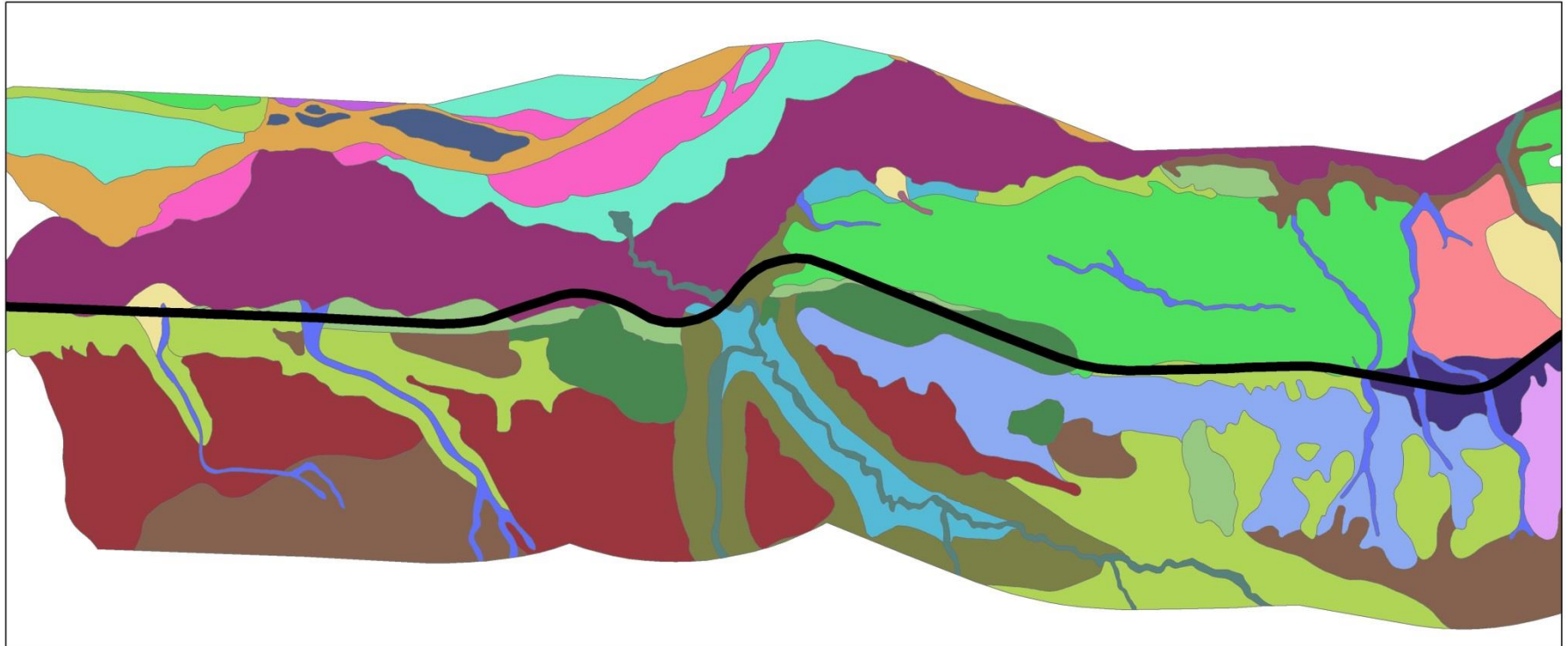


Extending Data-Driven Pages with .NET and ArcObjects

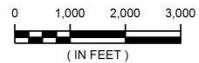
GeoDev Meetup - Seattle, WA
April 8th, 2015

David Howes, Ph.D.
David Howes, LLC
dhowes.com

Task: Develop Map Series with Custom Figure



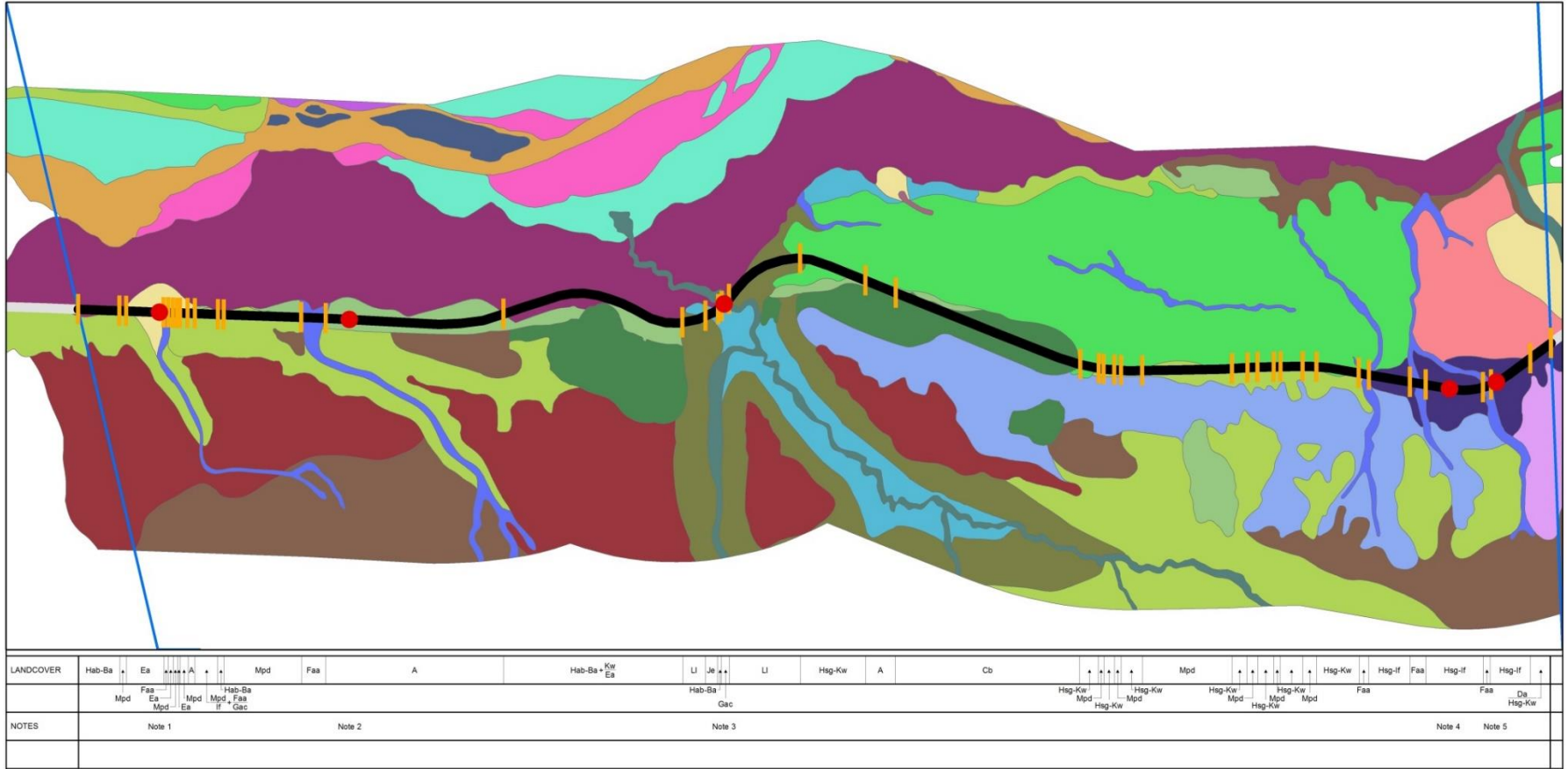
LANDCOVER	Hab-Ba	Ea	A	Mpd	Faa	A	Hab-Ba	Kw	Ea	Li	Je	Li	Hsg-Kw	A	Cb	Mpd	Hsg-Kw	Hsg-If	Faa	Hsg-If	Hsg-If
	Mpd	Faa	Mpd	Hab-Ba	Faa	Gac	Hsg-Kw	Mpd	Hsg-Kw	Mpd	Hsg-Kw	Mpd	Hsg-Kw	Mpd	Faa	Faa	Hsg-Kw				
NOTES	Note 1			Note 2			Note 3						Note 4		Note 5						



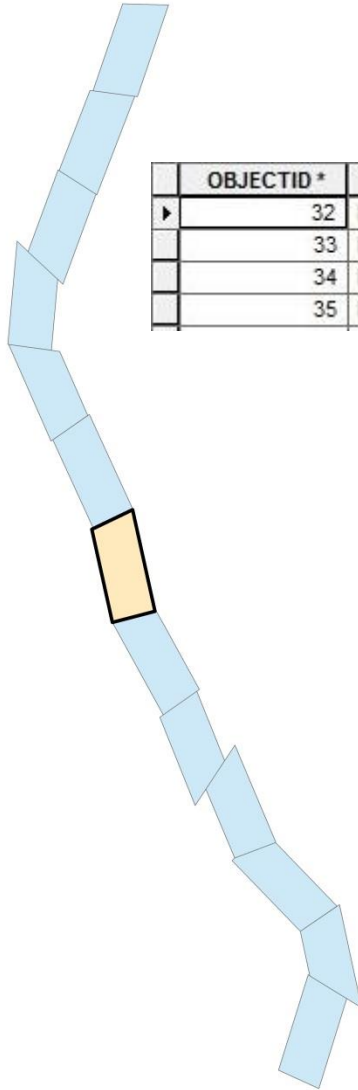
DATE	DRAWN	CHECKED	DATE	NO.
11/2/2001				022



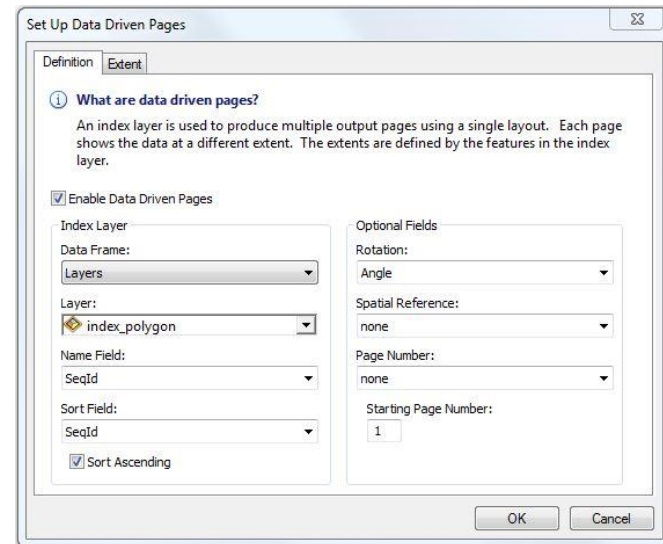
Tie Profile Bars & Labels to Linear Referencing



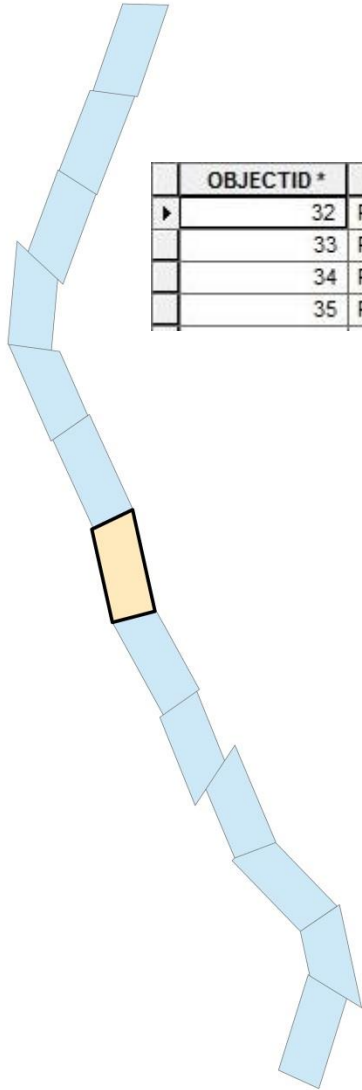
Start with Data-Driven Pages



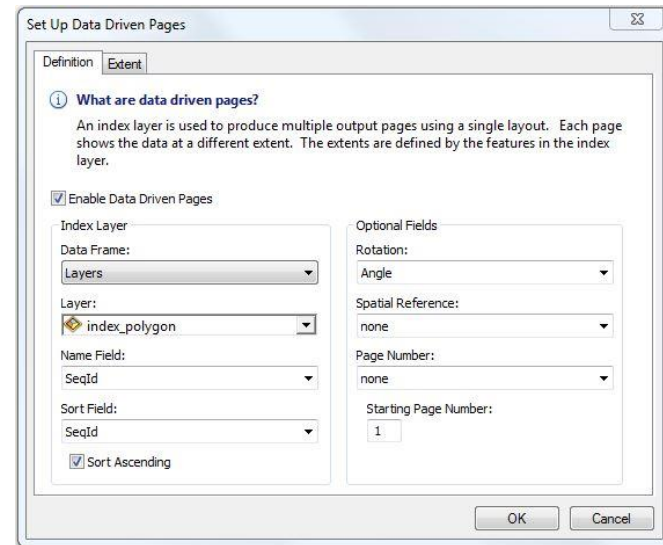
OBJECTID *	Shape *	PageNumber	Groupid	SeqId	Angle	Scale	PageLabel
▶ 32	Polygon	27	1	27	107.22	24000	027
33	Polygon	26	1	26	77.84	24000	026
34	Polygon	25	1	25	45.97	24000	025
35	Polygon	24	1	24	67.16	24000	024



Start with Data-Driven Pages

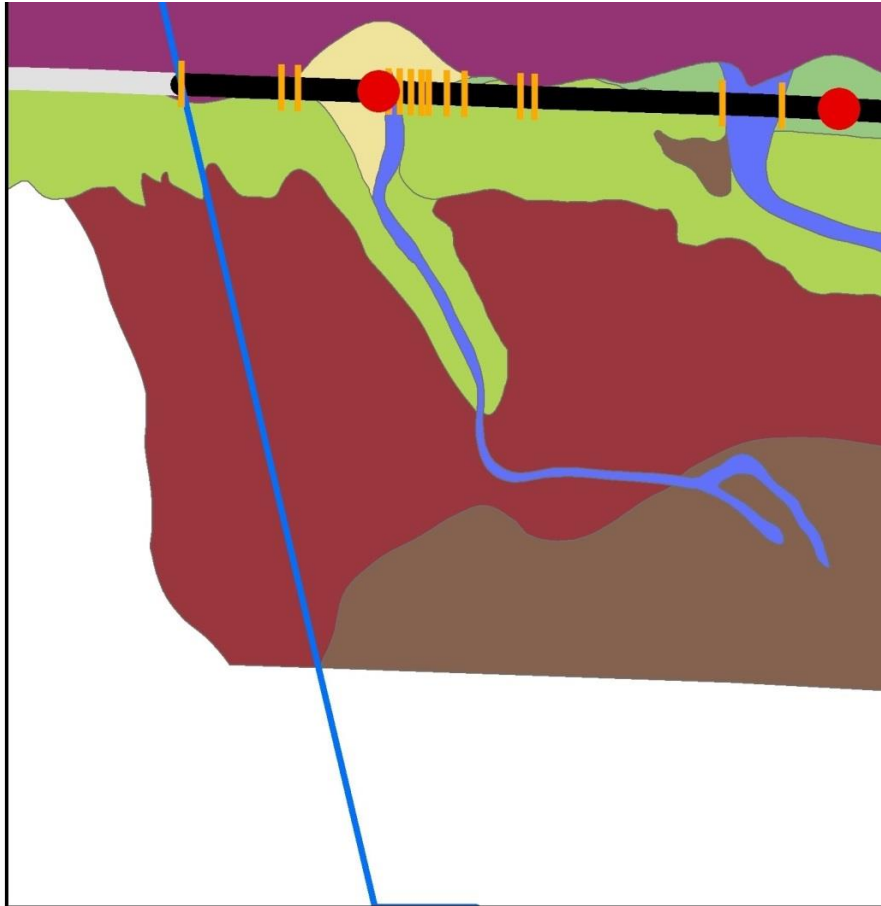


OBJECTID *	Shape *	PageNumber	Groupid	SeqId	Angle	Scale	PageLabel
32	Polygon	27	1	27	107.22	24000	027
33	Polygon	26	1	26	77.84	24000	026
34	Polygon	25	1	25	45.97	24000	025
35	Polygon	24	1	24	67.16	24000	024



~~ArcPy - add/remove map elements~~

Create a .NET Add-In



LANDCOVER	Hab-Ba	Ea	A	Mpd	Faa
	Mpd	Faa Ea Mpd	Mpd Ea	Mpd If	Hab-Ba Faa Gac
NOTES	Note 1				Note 2

Map Series Development Tools

Setup

Setup file path: C:\Temp\Map Series Dev Inputs.txt Select

Setup values:

Map document - C:\Temp\Demo\Demo.mxd
 Map data file geodatabase - C:\Temp\Demo\Demo.gdb
 Index layer - index_polygon
 Index layer group ID - 1
 Land cover route layer - landcover_alignment Update

Element Definition

Map: < > Update index only Current index: 21 Update Extent Set Map Index

Databand type: Land Cover Apply to all Build Load Delete

Adjust label position: Get Element Selected element name: <None selected>

Relative position: X adjustment factor: 1.00 Update

Y adjustment factor: 1.00 Update

Element definition: Clear Save Dynamic text: Update Custom map center: Set Reset

Map Export

Start Index: End Index: Set Current Map Output type: PDF Resolution: 300

Overwrite existing file Load data bands? Export Map(s) Reset

Messages Show Info Clear Messages Reset Form

Store Element Properties in a Table

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
21328	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_UpperLabel_2	Text	Mpd - Ea	5/2/2013 10:09:34 PM
21329	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_UpperLabel_2	ColorRGB	33554432	5/2/2013 10:09:34 PM
21330	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_UpperLabel_2	Size	6	5/2/2013 10:09:34 PM
21331	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_UpperLabel_2	PtX	14.9635999999991	5/2/2013 10:09:34 PM
21332	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_UpperLabel_2	PtY	3.64810000000034	5/2/2013 10:09:34 PM
21333	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_UpperLabel_2	HorizontalAlignment	esriTHACenter	5/2/2013 10:09:34 PM
21334	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_UpperLabel_2	VerticalAlignment	esriTVACenter	5/2/2013 10:09:34 PM
21335	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_UpperLabel_2	AnchorPoint	esriBottomMidPoint	5/2/2013 10:09:34 PM
21336	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_SingleLabel_1	Text	Faa	5/2/2013 10:09:34 PM
21337	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_SingleLabel_1	ColorRGB	33554432	5/2/2013 10:09:34 PM
21338	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_SingleLabel_1	Size	6	5/2/2013 10:09:34 PM
21339	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_SingleLabel_1	PtX	14.6540999999997	5/2/2013 10:09:34 PM
21340	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_SingleLabel_1	PtY	3.60310000000027	5/2/2013 10:09:34 PM
21341	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_SingleLabel_1	HorizontalAlignment	esriTHACenter	5/2/2013 10:09:34 PM
21342	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_SingleLabel_1	VerticalAlignment	esriTVACenter	5/2/2013 10:09:34 PM
21343	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_SingleLabel_1	AnchorPoint	esriCenterPoint	5/2/2013 10:09:34 PM
21344	C:\Temp\Demo\Demo.mxd	1	21	Text	DBD_LC_Text_2_PlusLabel	Text	+	5/2/2013 10:09:34 PM

1 (0 out of 1095 Selected)

Use Clean Error Handling & Messaging

Messages

5/2/2013 8:30:51 PM *Get Selected Element*
Please select just one element.

Messages

5/2/2013 11:09:22 PM *Build Terrain Unit Data Band*
A general error occurred. Please report the following details to the system developer.

Method: BuildDataBand_Point
The index passed was not within the valid range.
at ESRI.ArcGIS.Geodatabase.IFeature.get_Value(Int32 Index)

Run Export Process Outside ArcMap

Map Export

Start Index: End index: Output type: PDF Resolution: 300

Overwrite existing file Load data bands?

**Map export from within
ArcMap:**

2 minutes per map

Map Series Export Utility

Setup

Setup File path: C:\Temp\Map Series Dev Inputs.txt

Setup values:

- Map document - C:\Temp\Demo\Demo.mxd
- Map data file geodatabase - C:\Temp\Demo\Demo.gdb
- Index layer - index_polygon
- Index layer group ID - 1
- Land cover route layer - landcover_alignment

Map Export

Start Index: End index: Output type: PDF Resolution: 300

Overwrite existing file

Messages

**Map export from outside
ArcMap (same code):**

2 seconds per map

Thanks for Coming