

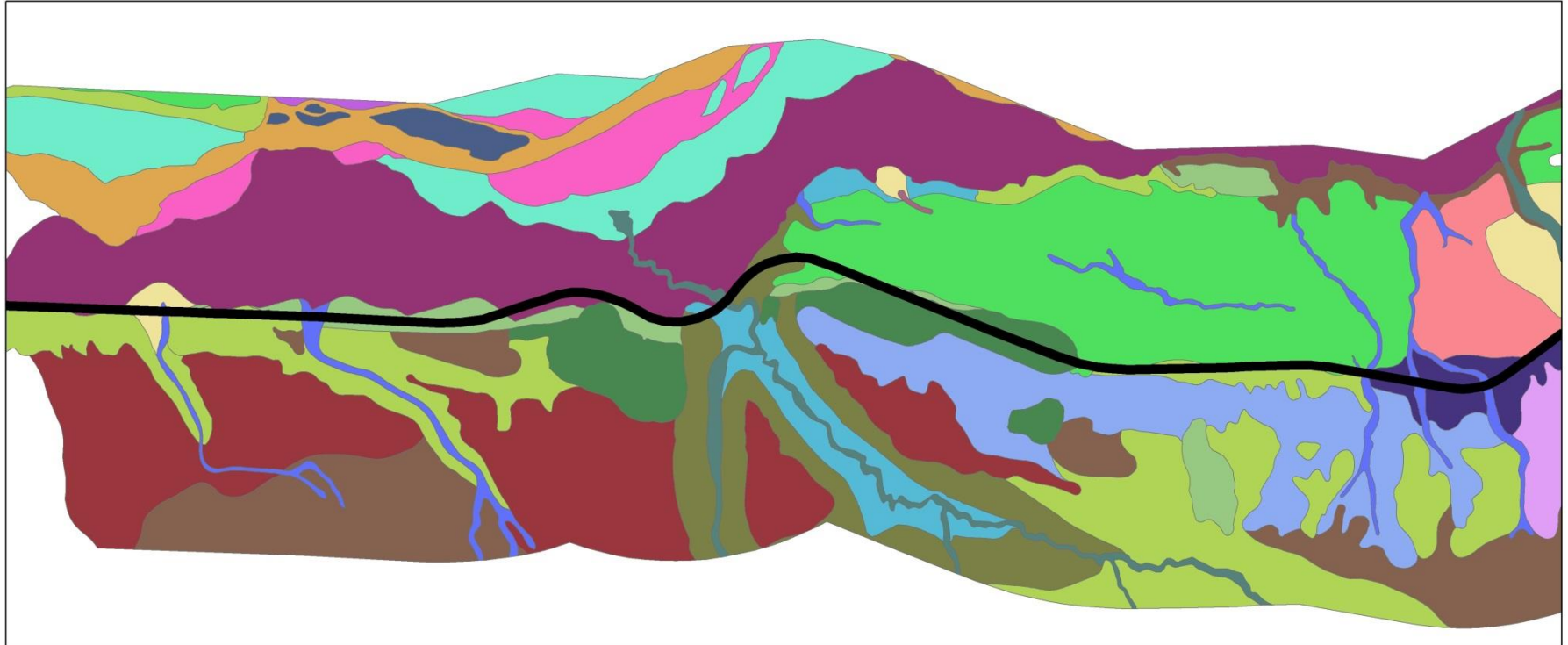


## Extending Data-Driven Pages with .NET and ArcObjects

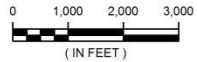
GeoDev Meetup - Freezing in Anchorage, AK  
February 19<sup>th</sup>, 2015

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David Howes, LLC  
[dhowes.com](http://dhowes.com)

# Task: Develop Map Series with Custom Figure



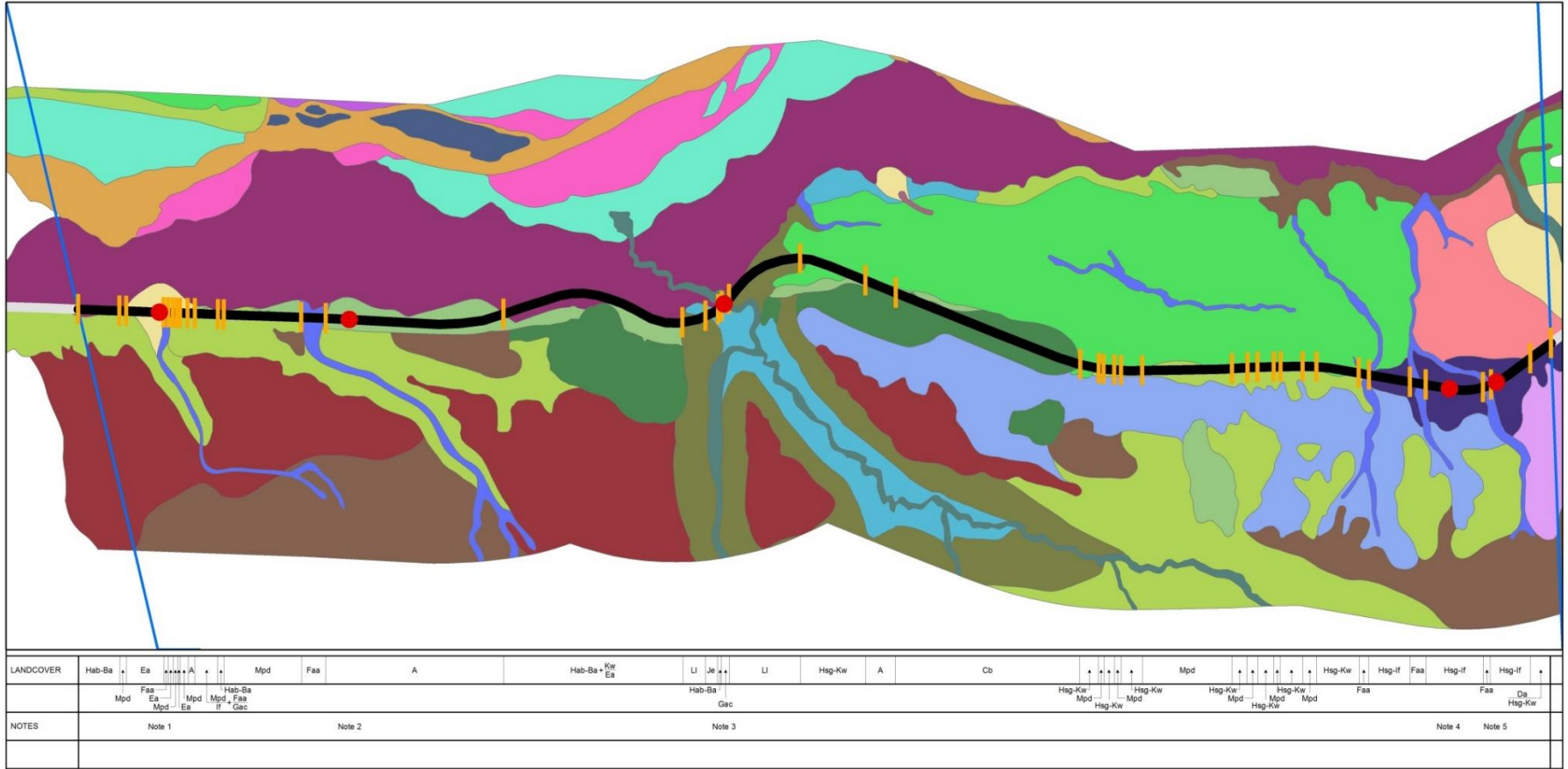
LANDCOVER	Hab-Ba	Ea	A	Mpd	Faa	A	Hab-Ba	Kw	Ea	Li	Je	Li	Hsg-Kw	A	Cb	Mpd	Hsg-Kw	Hsg-If	Faa	Hsg-If	Hsg-If
	Mpd	Faa	Mpd	Hab-Ba	Faa	Gac	Hsg-Kw	Mpd	Hsg-Kw	Mpd	Hsg-Kw	Mpd	Hsg-Kw	Mpd	Faa	Faa	Hsg-Kw				
NOTES	Note 1			Note 2			Note 3						Note 4		Note 5						



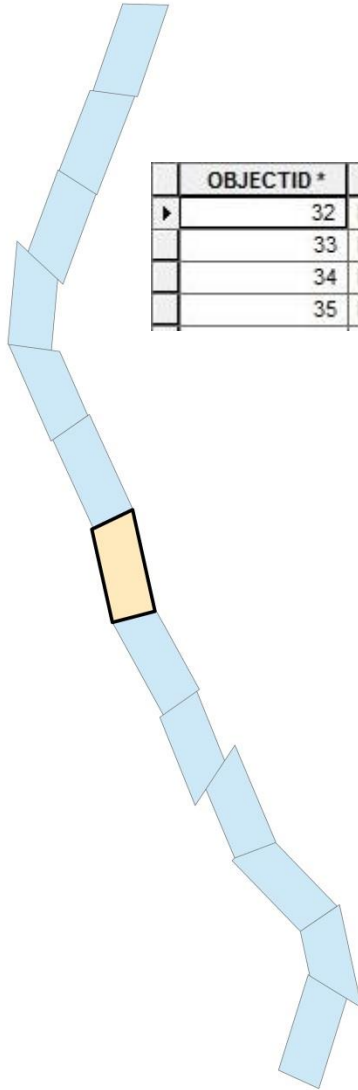
DATE	DRAWN	CHECKED	DATE	NO.
11/20/00				022



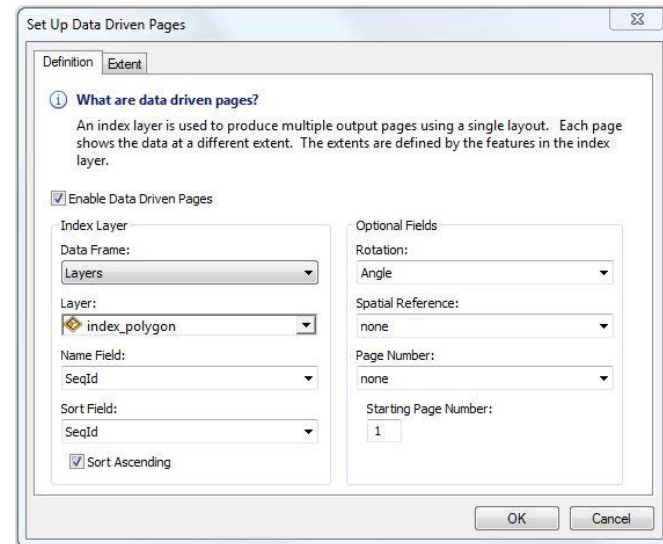
# Tie Profile Bars & Labels to Linear Referencing



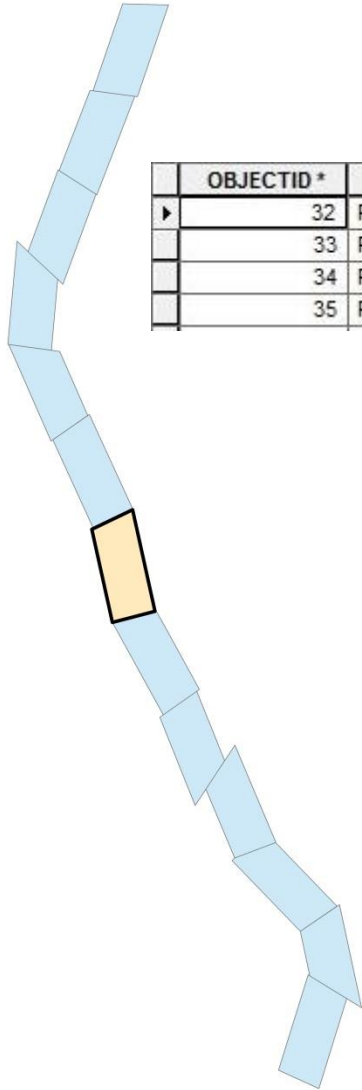
# Start with Data-Driven Pages



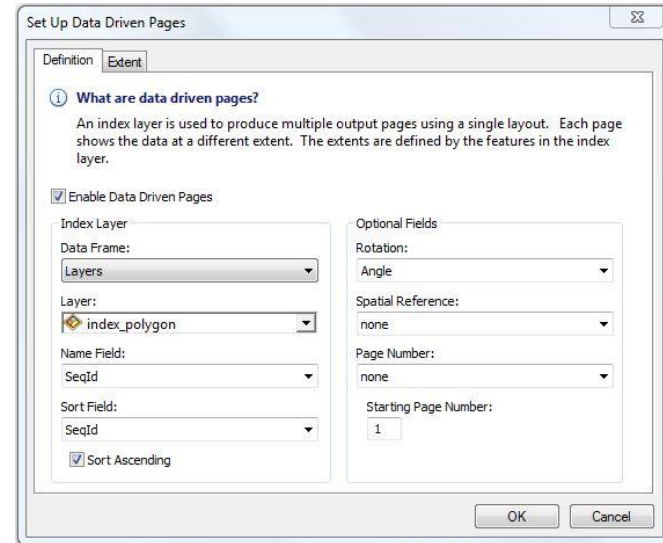
OBJECTID *	Shape *	PageNumber	GroupId	SeqId	Angle	Scale	PageLabel
32	Polygon	27	1	27	107.22	24000	027
33	Polygon	26	1	26	77.84	24000	026
34	Polygon	25	1	25	45.97	24000	025
35	Polygon	24	1	24	67.16	24000	024



# Start with Data-Driven Pages



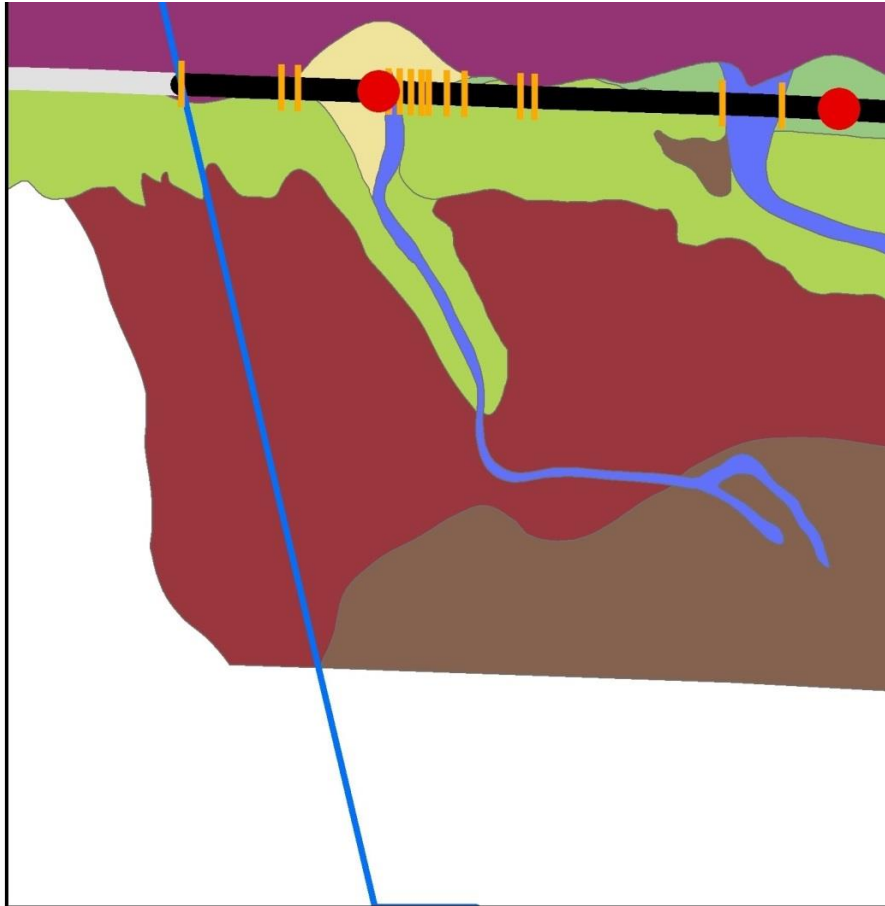
OBJECTID *	Shape *	PageNumber	Groupid	SeqId	Angle	Scale	PageLabel
32	Polygon	27	1	27	107.22	24000	027
33	Polygon	26	1	26	77.84	24000	026
34	Polygon	25	1	25	45.97	24000	025
35	Polygon	24	1	24	67.16	24000	024



~~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**

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**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

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**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 Set Reset

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**Map Export**

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

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

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**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**

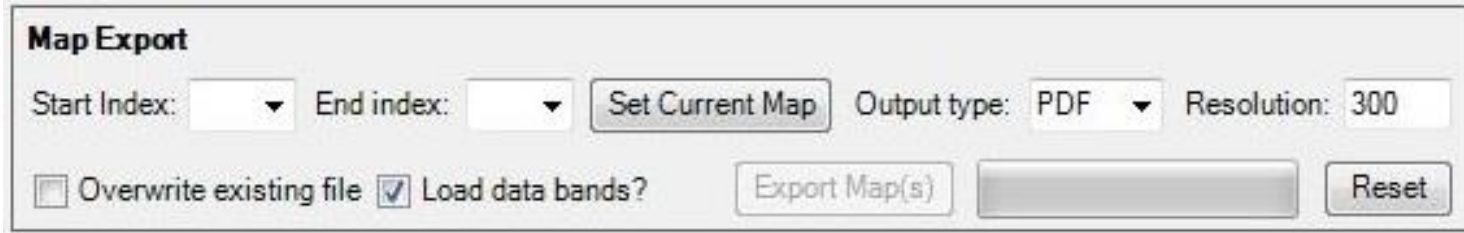
**5/2/2013 11:09:22 PM** *Build Terrain Unit Data Band*  
A general error occurred. Please report the following details to the system developer.

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



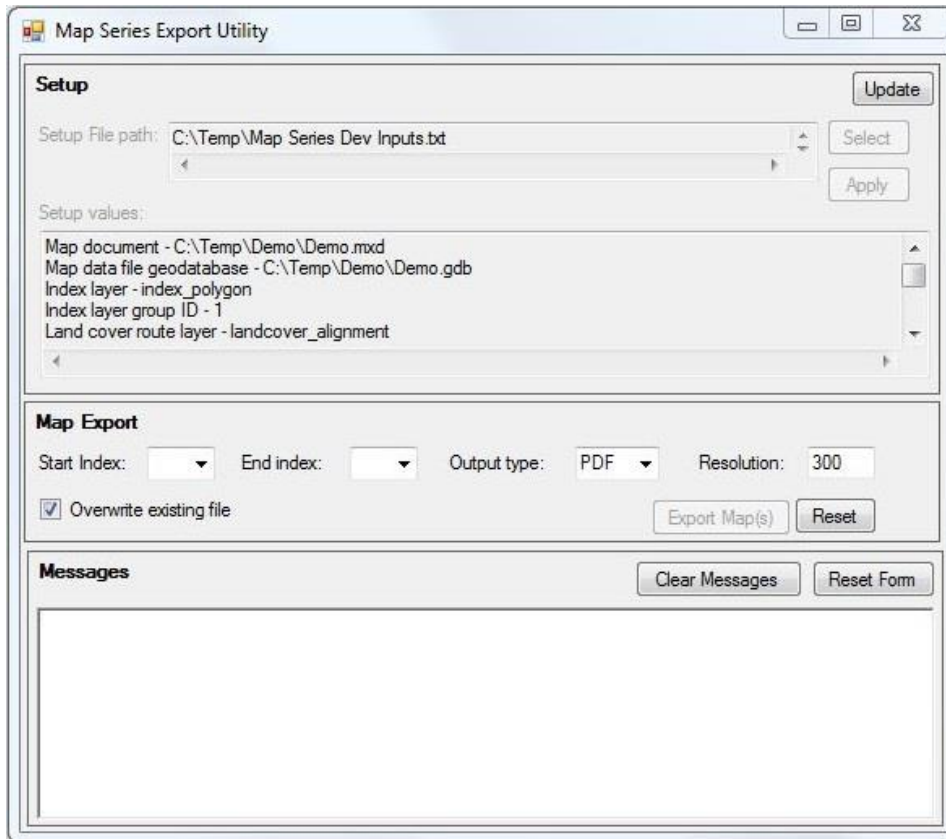
**Map Export**

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**