



Introduction to eziLink Training

For the Ministry of Forests and Sustainable Resource Management

Overview of Session

- ♦ Instruction on concepts
- ♦ Hands-on exercises and examples
- ♦ Troubleshooting
- ♦ Questions and Answers



Training Objectives

- ♦ At the end of the training, participants will be able to:
 - ♦ Use eziLink to create XML/GML files for Opening Definition, Disturbance, Silviculture Activity, Forest Cover Polygon and Milestone reporting,
 - ♦ Submit the XML/GML files through the ESF Submission System; and
 - ♦ Check for results of ESF submission and know where in eziLink to address any rejected submissions.



Agenda

- Introduction of Instructors and Students
- Introduction to e-Submission Concepts
- Introduction to the Basic Navigation in eziLink
- Opening, Changing and Saving Submissions
- Practice Exercises
- Creating a New Submission
- Practice Exercises
- Quality Assurance and Cartography



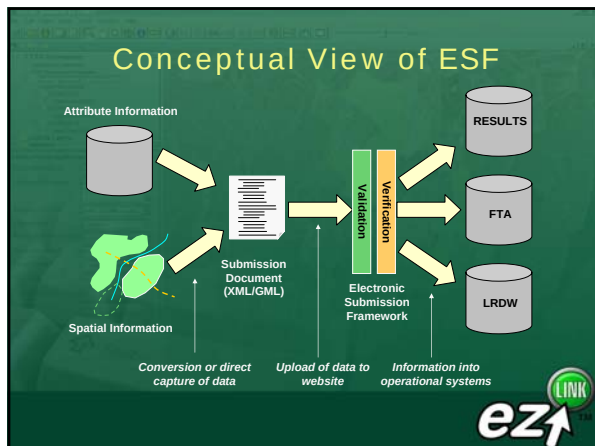


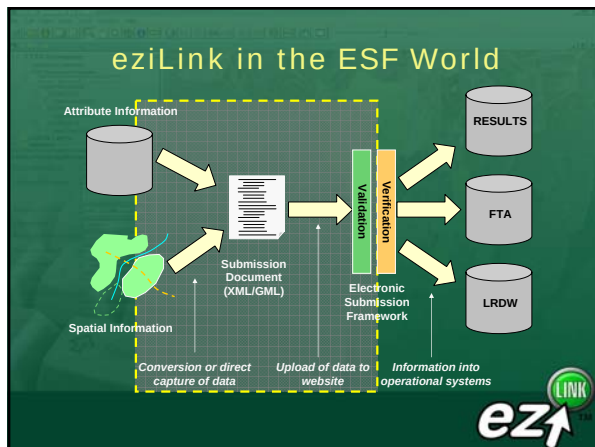
Section 1 - Introduction to e-Submission Concepts

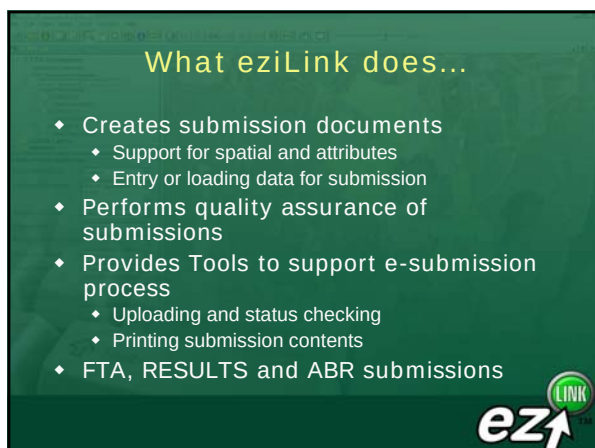
Overview

FTA/ECAS		Amendments	RESULTS	
PLANNING	DEVELOPMENT	HARVEST	SILVICULTURE	
Forest Stewardship Plan (FSP) Forest Development Plan (FDP)	Approval to Harvest (Government) Block is Engineered/Costs (Licensee)	Harvest Complete Submit* 1, 2, 3, 4, 5	Regen Met Submit* 3, 4, 5	Free to Grow Met Submit* 3, 4, 5
FRPA – Current Forest Range and Practices Act	Electronic - ECAS (Appraisal) FTA (Cut Permit)	Site Plan (SP) NO NEED TO AMEND	Regen Survey Submit* 4, 5	Free to Grow Survey Submit* 4, 5
FPC – Legacy Forest Practices Code FORM GROUP - FS708 FORM A = (Opening Definition-1) FORM B = (Disturbance - 2, Silviculture Activity - 4) FORM C = (Milestone 3, Forest Cover Polygon - 5)	Hardcopy - ECAS (Appraisal) FTA (Cut Permit)	Silviculture Prescription (SP) MUST BE AMENDED		









What eziLink Does Not Do...

- ◆ Perform data management
- ◆ Understand business rules associated with the submission
- ◆ Replace mapping and business management systems

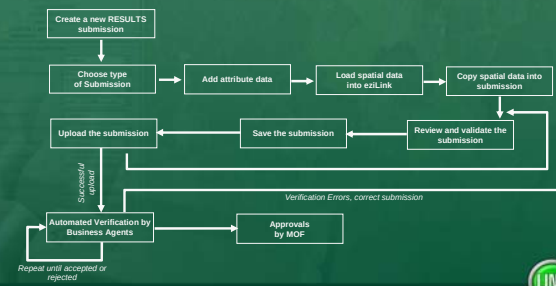


District Use of eziLink

- ◆ Districts will use eziLink to create the submission documents
 - ◆ add clean spatial information to a submission
 - ◆ add attribute information to a submission
 - ◆ Quality assure and troubleshoot submissions



RESULTS Submission Process



```

graph TD
    A[Create a new RESULTS submission] --> B[Choose type of Submission]
    B --> C[Add attribute data]
    C --> D[Load spatial data into eziLink]
    D --> E[Copy spatial data into submission]
    E --> F[Review and validate the submission]
    F --> G[Save the submission]
    G --> H[Upload the submission]
    H --> I[Automated Verification by Business Agents]
    I -- "Successful review" --> J[Approvals by MOF]
    I -- "Verification Errors, correct submission" --> F
    I -- "Repeat until accepted or rejected" --> I
  
```



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RESULTS Submissions Supported

- ◆ Opening Definition
- ◆ Disturbance Reporting
- ◆ Silviculture Activity Reporting
- ◆ Forest Cover Polygon Reporting
- ◆ Milestone Reporting

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Section 2 - Introduction to Basics

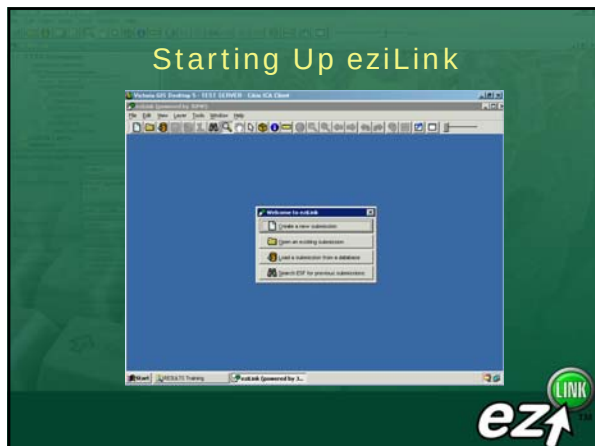
ezLink

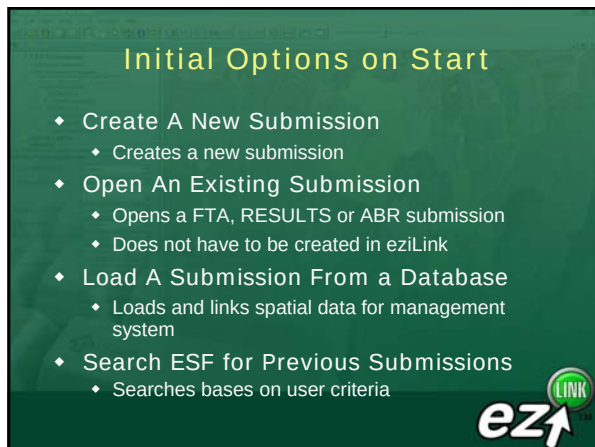
Terminology

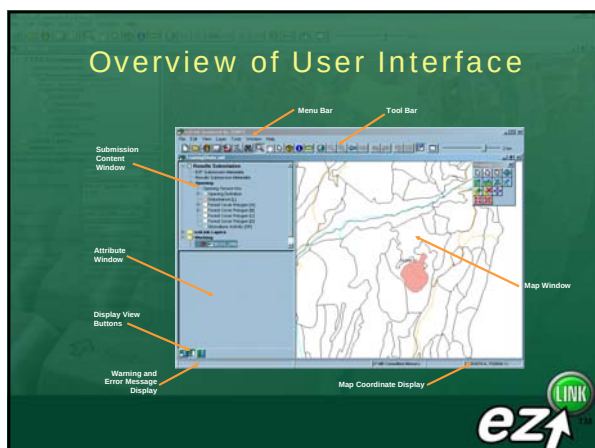
- ◆ Feature
 - ◆ A real world thing represented in ezLink that can include spatial and non-spatial attributes
- ◆ Item
 - ◆ Something that can be manipulated in ezLink (copied, pasted, edited)
- ◆ Layer
 - ◆ a collection of spatial features that have a common theme and style

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Menus

- ◆ File
 - ◆ File management and e-submission utilities
- ◆ Edit
 - ◆ Selection and copy functions
- ◆ View
 - ◆ Change spatial display
 - ◆ Change what is visible to the user

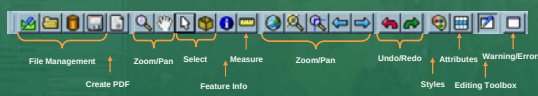


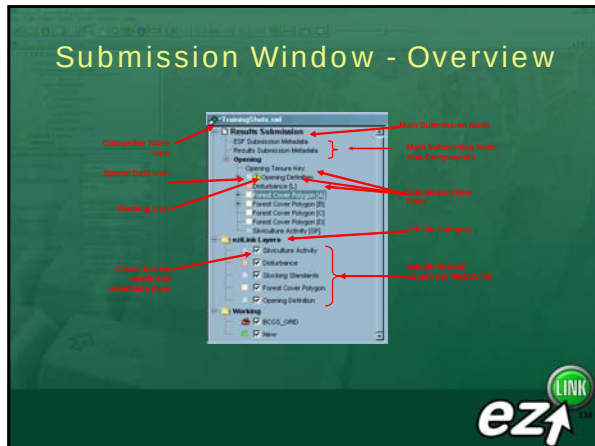
Menus

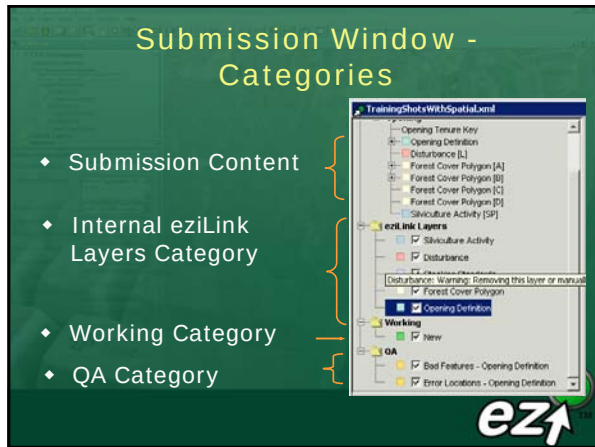
- ◆ Layer
 - ◆ Functions for creating and working with spatial layers
- ◆ Tools
 - ◆ Quality assurance tools
 - ◆ Tools to manipulate information
 - ◆ ezLink preferences
- ◆ Window
- ◆ Help

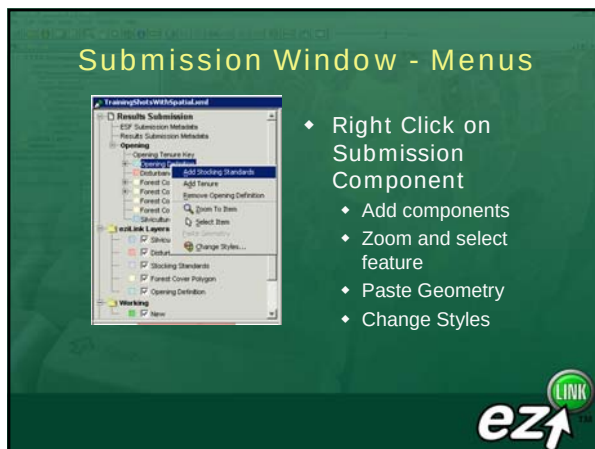


Toolbar

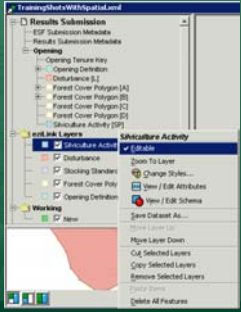






Submission Window - Menus



- ♦ Right Click on Layers
 - ♦ Edit and modify Attributes
 - ♦ Save to new dataset
 - ♦ Move up/down in layer order
 - ♦ Cut, copy and remove layers

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Exercises

- ♦ Practice with starting ezLink, opening submissions, and working with the user interface.
- ♦ Exercise 1, 2 & 3 from the Training Manual

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New Submission Wizard

- ♦ Guides you through the creation of a new submission
- ♦ 'Fill-in the blanks' approach
- ♦ Remembers the last values used
- ♦ Shows the minimum required attributes



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New Submission Wizard

- Attributes can be entered, but spatial will be dealt with later in the process



Key Items for New Submissions

- Things to have
 - Client number and contact information
 - Details about the submission to be made
 - Spatial data
 - Format
 - Projection of the source data
 - Clearly identifies what spatial feature belongs with what attributes



Exercises

- Practice with creating a new submission with all the attributes filled in for a new Opening Definition submission
- Exercise 4 from the Training Manual
- Exercise 5 provides details on the formatting and files that ezLink creates



Disturbance Reporting

- ♦ Exercise 6



Silviculture Activity Reporting

- ♦ Exercise 7



Forest Cover Polygon Reporting

- ♦ Exercise 8



Milestone Reporting

- ♦ Exercise 9





Section 3 - Working with Spatial Data

Overview

- ♦ ezLink support reading from Shapefile, IGDS, GML and WKT
- ♦ Shapefile format is recommended
 - ♦ Structure more similar to that required by submissions
- ♦ The better the data coming in, the less work you have to do

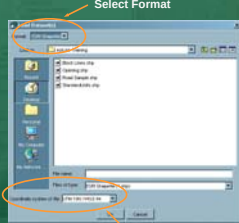


Projections

- ♦ eziLink Supports the standard projections used in BC
 - ♦ Albers (BC Standard)
 - ♦ UTM
 - ♦ Geographics (lat/long)
- ♦ Data is re-projected as data is loaded
 - ♦ when loading data be sure to select the projection of the source data



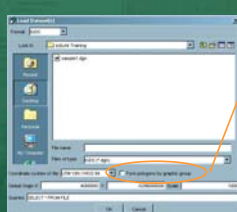
Loading Spatial Data



- ♦ Loading any spatial file requires user to specify
 - ♦ Format (IGDS, Shape)
 - ♦ Source Projection
- ♦ Some formats require additional information



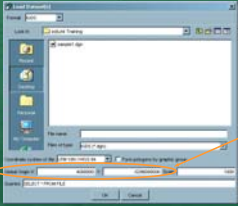
Loading IGDS Data



- ♦ Create polygons from graphic group
 - ♦ Check to have eziLink to create polygons from lines with a common graphic group number



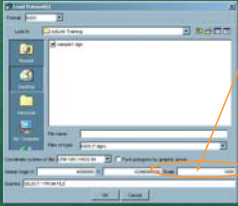
Loading IGDS Data



- ♦ Global Origins
 - ♦ In Units of Resolution
 - ♦ MOF Standard
 - X: 4,000,000 UOR
 - Y: -5,296,000,000 UOR

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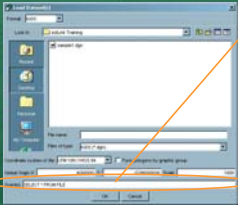
Loading IGDS Data



- ♦ Scale
 - ♦ Converts units to proper projected units (ie metres)
 - ♦ Units of resolution per ground unit
 - ♦ MOF Standard
 - 1000 mm per Meter for a UTM or Albers projection

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Loading IGDS Data



- ♦ Ability to Query
 - ♦ Level
 - ♦ Colour
 - ♦ Type
 - ♦ and more...
- ♦ Use a SQL where clause
 - ♦ "WHERE LEVEL = 43" to select level 43 features

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IGDS Data Recommendations

- ♦ Simple geometry is better - limit use of complex shapes
- ♦ Geometry should be 'cleaned' through Maps 3D to resolve issues
- ♦ Use the standard global origins and units of measure
- ♦ Text is loaded into points and labeled



Adding Spatial Data

- ♦ Adding spatial data to the submission is a 'cut and paste' operation



Adding Spatial Data

- ♦ Only one geometry can be pasted into a single submission component.
 - ♦ i.e. a single polygon or multi-part polygon can be pasted into an Opening Definition in the submission window

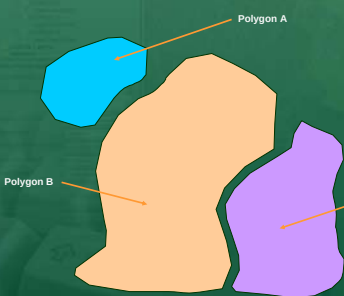


Exercises

- Practice with
 - loading shapefile
 - copying geometry into submission
- Exercise 10 & 11 from the Training Manual



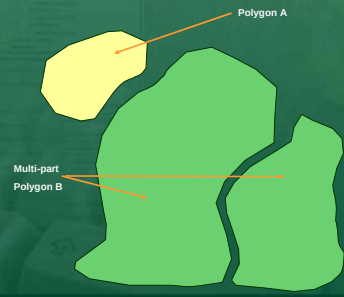
What is a Multipart Feature?



Polygon	CP	BLK	Area
A	101	1	15 ha
B	101	2	40 ha
C	101	2	25 ha



What is a Multipart Feature?



Polygon	CP	BLK	Area
A	101	1	15 ha
B	101	2	65 ha

- Single set of attributes
- Provides a way of aggregating spatial information



What is a Multipart Feature?



Representation of Cutting Permit

Polygon	CP	Area
A	101	80 ha

- Applies to all types of Geometries

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How Do Spatial Geometries Relate

 Point

 Point

 Linestring

 Linestring

 Polygon

 Polygon

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How Do Spatial Geometries Relate

 Point

 Point

 Multi-Point

 Linestring

 Linestring

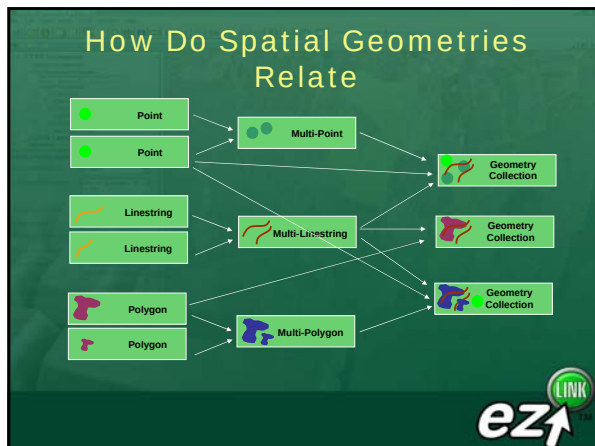
 Multi-Linestring

 Polygon

 Polygon

 Multi-Polygon

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Widely Used Spatial Functions

- ♦ Used with to interact selected features
- ♦ Operates on features not entire layers

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Widely Used Spatial Functions

- ♦ Union
 - ♦ Creates a seamless feature by merging adjacent selected features

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Widely Used Spatial Functions

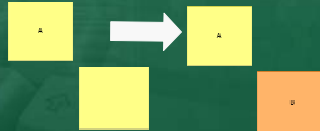
- ♦ Combine
 - Creates a multi-part geometry



ez [LINK](#)

Widely Used Spatial Functions

- ♦ Separate Features
 - Simplifies multi-part geometry



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Widely Used Spatial Functions

- ♦ Polygonize
 - Creates a polygon from selected lines
 - No gaps or undershoots in lines



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Widely Used Spatial Functions

- ♦ Calculate area/lengths from geometry
 - ♦ ESF compares net areas to gross areas of the geometry
 - ♦ Available from Tools Menu



Exercises

- ♦ Practice with basics of manipulating spatial data
- ♦ Exercise 12, 13, & 14 from the Training Manual





Section 4 - Basic Cartographic Operations

Overview of Cartography

- ♦ eziLink supports basic cartographic operations
 - ♦ Labeling
 - ♦ Theming
 - ♦ Graphic display for colour, fill, transparency, etc...
- ♦ Save the styles and reuse in all submissions
- ♦ Access reference information across the internet for government servers



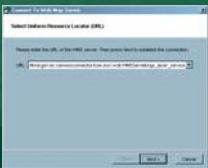
Working with Themes and Layers

- ♦ Layers can be saved and reloaded
 - ♦ Allows users to reuse styles
 - ♦ Saved under the "Layers" menu
 - ♦ Can be set-up permanently for all FTA or RESULTS submissions in the eziLink preferences.



Adding External Base Maps

- ♦ Web Mapping Service (WMS) support
 - ♦ Support for published spatial information on the web
 - ♦ Useful for visual Q/A against orthophotos and TRIM




Exercises

- ♦ Practice with changing styles, saving formatting and external data
- ♦ Exercise 15, 16 & 17, 18 from the Training Manual





Section 5 - e-Submission Utilities and Services

e-Submission Utilities

- ♦ Generate PDF Report
- ♦ Upload of Submission
- ♦ Query of Submission Status
- ♦ Management of Submission Details



PDF Report



- ◆ Provides ability to print or save digital report of the submission being made
- ◆ Includes attribute and map



Uploading Submission

- ◆ Requires IDIR with proper permissions
- ◆ Allows eziLink to track information about submission
 - ◆ Error messages
 - ◆ Submission IDs




Checking Status

- ◆ Allows for search on status of uploads
- ◆ Two approaches:
 - ◆ Search the ESF
 - ◆ Open and Check Submission Status
- ◆ Provides details on messages




Exercises

- ♦ Practice with searching ESF and generating PDF document
- ♦ Exercise 19 & 20 from the Training Manual





Section 6 - Quality Assurance and Troubleshooting

Steps for Q/A

- ♦ Ensure all minimum requirements are completed
 - ♦ no flags in the submission content window
- ♦ Validate Layers that will be submitted
 - ♦ Checks on spatial topology and content
- ♦ Visually inspect against WMS Layers
 - ♦ Looking for data not in correct location
- ♦ Review attributes
 - ♦ Ensure that attributes make sense



Checking Minimum Requirements

🚨 Review the submission content window and ensure that warning flags are completely removed



Validate Spatial Data

- ♦ Use the internal spatial validation tools
- ♦ Check each spatial layer in the submission




Validate Spatial Data

- ♦ Check
 - ♦ Basic Topology
 - Self intersections
 - ♦ Consecutive Points
 - Identifies duplicate vertices
 - ♦ Minimum Segment Length
 - Distance between vertices



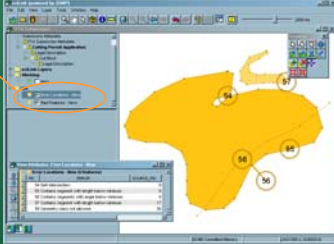
Validate Spatial Data

- Check
 - Minimum Angle
 - identifies spikes in the geometry
 - Minimum Area
 - Small sliver polygons
 - Geometry Types



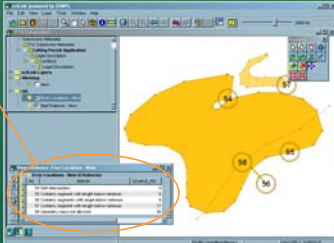
Overview of Validation

- Generates Error Layers
 - Features in error
 - Location of errors



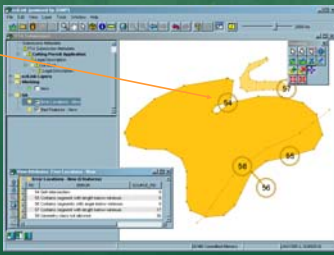

Overview of Validation

- Attributes of errors
 - Identifies
 - issue
 - feature with issue




Overview of Validation

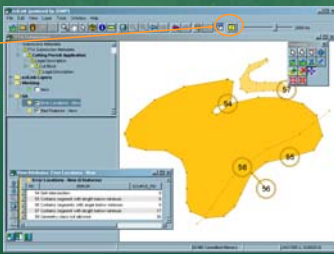
- ♦ Spatially identifies location of errors



The screenshot shows the ez1 software interface. On the left is a project tree with folders like 'Data', 'Reports', and 'Validation'. The main window displays a map of Africa with several yellow circular markers indicating error locations. A red line points from the bullet point to one of these markers. The ez1 logo and a 'LINK' button are in the bottom right corner.

Overview of Validation

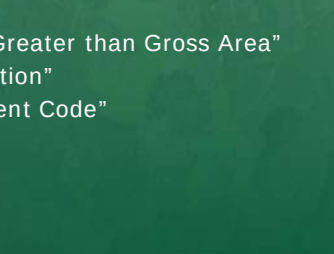
- ♦ Further information is available



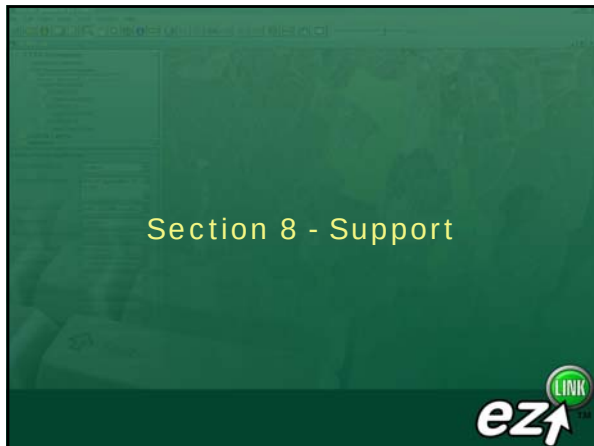
The screenshot is identical to the one above, showing the ez1 software interface with a map of Africa and error markers. A red line points from the bullet point to one of the markers. The ez1 logo and a 'LINK' button are in the bottom right corner.

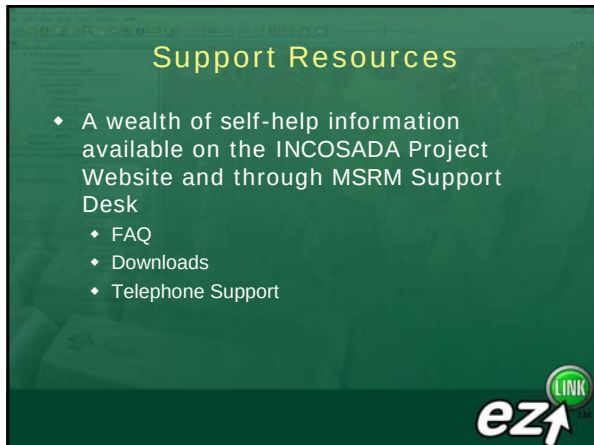
Common Problems

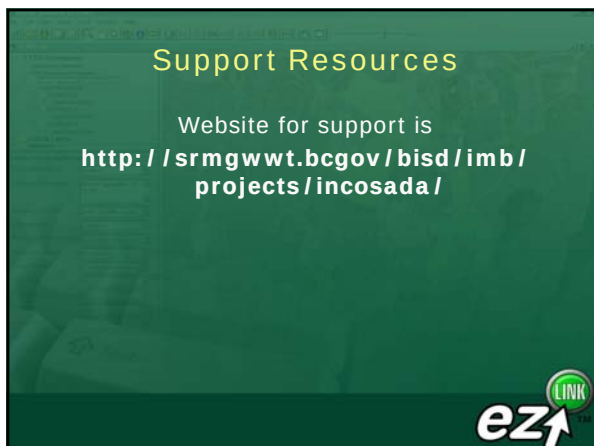
- ♦ "Net Area is Greater than Gross Area"
- ♦ "Self Intersection"
- ♦ "Incorrect Client Code"



The screenshot is identical to the ones above, showing the ez1 software interface with a map of Africa and error markers. A red line points from the first bullet point to one of the markers. The ez1 logo and a 'LINK' button are in the bottom right corner.







Support Resources

E-Mail Address for Support
INCOHELP@victoria1.gov.bc.ca

Telephone Support
(250) 952-4790