Enterprise GIS Solutions for Forest Management

2006 ESRI User Conference
August 8, 2006
Agenda

• Introductions
• Background
• Forecon TMS
• TIGERWeb™ Demo
• What the Future holds
• Questions?
Introductions

Mike Darr, Director for GIS & Database Management Services, FORECON, Inc.

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Steve Ellis, Director of Commercial Solutions, GeoDecisions

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FORECON, Inc

Founded in 1954

- A Multi-Disciplinary Forestry and Natural Resources Consulting Firm
- Provide Services to a Variety of Landowners; Small Private, Industrial, Institutional, Municipal, State and Federal
FORECON, Inc

• Forest Land Management is Core Business
• Representative Expertise in Forestry, Wildlife Management, Ecosystems Markets (Carbon Sequestration), Forest Certification, and Growth & Yield Modeling (and Others)
• Developed Concept of Hardwood Database Management System to Provide Support for Institutional Forestland Investors
FORECON, Inc

- Staff of Over 50
- Nine (9) Offices in NY, PA, WV & MI
- Recognized Leader in Hardwood Forest Mgt.
- GSA Schedule Contractor
GeoDecisions

Founded in 1986

- GIS Mapping and Analysis
- Out of Penn State University

Subsidiary of Gannett Fleming 1992

- Support Engineering Operations
- Became Software Independent
GeoDecisions

2002 GeoDecisions

• Operates as a Division of Gannett Fleming
• IT Company Specializing in Spatial Information
GeoDecisions

• Staff of over 170
• 20 offices
  Nationwide
• Recognized leader
  in GIS industry
• ISO 9001 Certified
Forecon TMS

• Need for moving forward
  – Coverage based GIS
  – Antiquated tools

• Phase Approach
  – Needs Assessment
  – Implementation plan
GIS Needs Assessment

- Outline the future
- Develop usable modules
- Dynamic document
Enterprise GeoDatabase

• MS SQL Server
• ArcSDE 9
• Migrated Coverages
• Orthos and DRG’s in Catalogs
ArcMap Tools

• Client Management Tool
• Grid Tool
• Harvest Tool
• Field Data import utility
ArcMap – Client Management

- Import legacy Data
- Create new owner databases
ArcMap – Grid Tool

- Generate Cruise Grids
- Specific Spacing & Direction
- Auto Attributing to Stands/Tracts
- Auto Numbering
ArcMap – Harvest Tool

- Maintain Topology
- Generate Harvest polygons
- Creates historical layers
- Merge Stands
ArcMap - Field Data Import Utility

• Import field inventory data collected on handheld devices
• Maintains data integrity
TIGER Desktop™

- Stand Typing routines
- Growth
- Reporting
TIGER Desktop™ - Stand Typing

• Generates Stand Types from Inventory information
• Creates Stand Type Profiles
TIGER Desktop™ - Growth

- Multiple Variants of USFS TWIGS Model
- Multiple Log Rules
- Multiple Volume Units
TIGER Desktop™ - Reporting

• Reporting at all levels
• Stand and Stock Tables
• Quarterly or Annual Reporting
• Initial Inventory Volumes
TIGERWeb™

- Mapping
- Growth
- Reporting
- Ad-Hoc Harvest Routine and Summary
- Administration
TIGERWeb™ - Mapping

- Client Data layers
- Basemap Reference Layers
- Orthophotos
- USGS Topo
- User defined selections for
  - Reporting
  - Growth
  - Summaries
TIGERWeb™ - Growth

- Multiple Variants of USFS TWIGS Model
- Multiple Log Rules
- Multiple Volume Units
- Export to
  - PDF
  - HTML
  - EXCEL
TIGERWeb™ - Reporting

- Reporting at all levels
- Stand and Stock Tables
- Quarterly or Annual Reporting
- Export to
  - PDF
  - HTML
  - EXCEL
TIGERWeb™ - Administration

- Set user
  - Roles
  - Permissions
  - Privileges
- Define viewable data and limits by ownership rights
- Defines accessible services by subscription level
TIGERWeb™

Live Demo

TIGERWebPortal.net
What the Future Holds

- Forest Insect Reporting & Mapping (FIRM™)
- Timberland Realty (TLR™)