Re-Engineered National Cruise System

Smokey Bear
U.S. Forest Service Mascot
Lincoln National Forest

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Why Re-Engineer?

• New technologies in the last decade
  – Better databases
  – Improved programming languages and tools
  – Field data recorder hardware
  – Field data recorder Operating System versions (Windows CE / Windows Mobile)
Why Re-Engineer?

• New Opportunities
  – Keep what worked
  – Re-design what didn’t
  – Add new features that improve efficiency
# Mobile Devices Then and Now

<table>
<thead>
<tr>
<th>Specification</th>
<th>2001</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processor Speed</strong></td>
<td>129 MHz</td>
<td>1,000,000 MHz</td>
</tr>
<tr>
<td>Memory</td>
<td>48 MB</td>
<td>512 MB</td>
</tr>
<tr>
<td><strong>Windows CE Version</strong></td>
<td>HPC Pro 2000</td>
<td>Windows Embedded 6.5</td>
</tr>
<tr>
<td>Display</td>
<td>640 x 240 256 color</td>
<td>800 x 480 HD</td>
</tr>
<tr>
<td>Battery</td>
<td>1,350 mAh</td>
<td>10,600 mAh</td>
</tr>
<tr>
<td>Wireless</td>
<td>no</td>
<td>Bluetooth, WiFi optional</td>
</tr>
<tr>
<td>GPS Receiver</td>
<td>no</td>
<td>optional</td>
</tr>
<tr>
<td>Other Accessories</td>
<td>none</td>
<td>Camera, scanner, etc.</td>
</tr>
<tr>
<td>Ingress Protection</td>
<td>IP65 (splash proof)</td>
<td>IP68 (immersion)</td>
</tr>
</tbody>
</table>
Then

FSCruiser V1

Data Entry

Establish Cruise Design

Customize

View / Edit Data

Components and Merging

Setup (Template) Files

Other Utilities

Forest Management Service Center
Now

FSCruiser V2

Data Entry

Cruise Manager

Establish Cruise Design

Customize

Setup (Template) Files

View / Edit Data

Components and Merging

Forest Management Service Center
New FSCruiser

Keeps popular functionality:

• Customizable Data Entry Tables
• Field Data Audits
• Limiting Distance Calculator
New FSCruiser

Improvements:

• Stable, reliable database
• Improved Sample Selection
  – Blocked and Systematic for Sample Tree (STR)
  – Systematic for PCM and FCM
  – Sampling state saved across populations
  – Insurance Tree tracking
  – Untally feature
New FSCruiser

• Improved sample selection (continued):
  – Multi-Strata tallying
  – Real-time auditing
  – 3P Sure To Measure
  – Streamlined Cruiser’s Initials
New FSCruiser

- CE Versions vs. Data Recorders
  - Settings > About: OS Version >= 4.2
  - Compatible:
    - Allegro CX and newer
    - All Archers
    - Newer Trimbles
    - Itronix Q200
  - Too Old:
    - Allegro CE and older
    - Older Trimbles
    - Older Pocket PC (HP or Compaq iPAQs)
    - Itronix Q100

Up-to-date list on the Web
New Cruise Design

- Importing statistics from historical cruises
- Insurance trees
- Recon to Production comparison
- Supplemental samples calculations
- Updated cruising costs
- Reports showing errors by value class
New Cruise Processing

- Biomass Library
- Ability to modify weight factors and merchandizing rules
- Create CSV files from select reports
- Report categories clarified
- Support for PDF and HTML output
- PDF file has optional watermark feature
- Graphical reports
The New NCS Suite

- FSCruiser
- Cruise Design
- Cruise Manager
- Cruise Processing
Questions?