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)

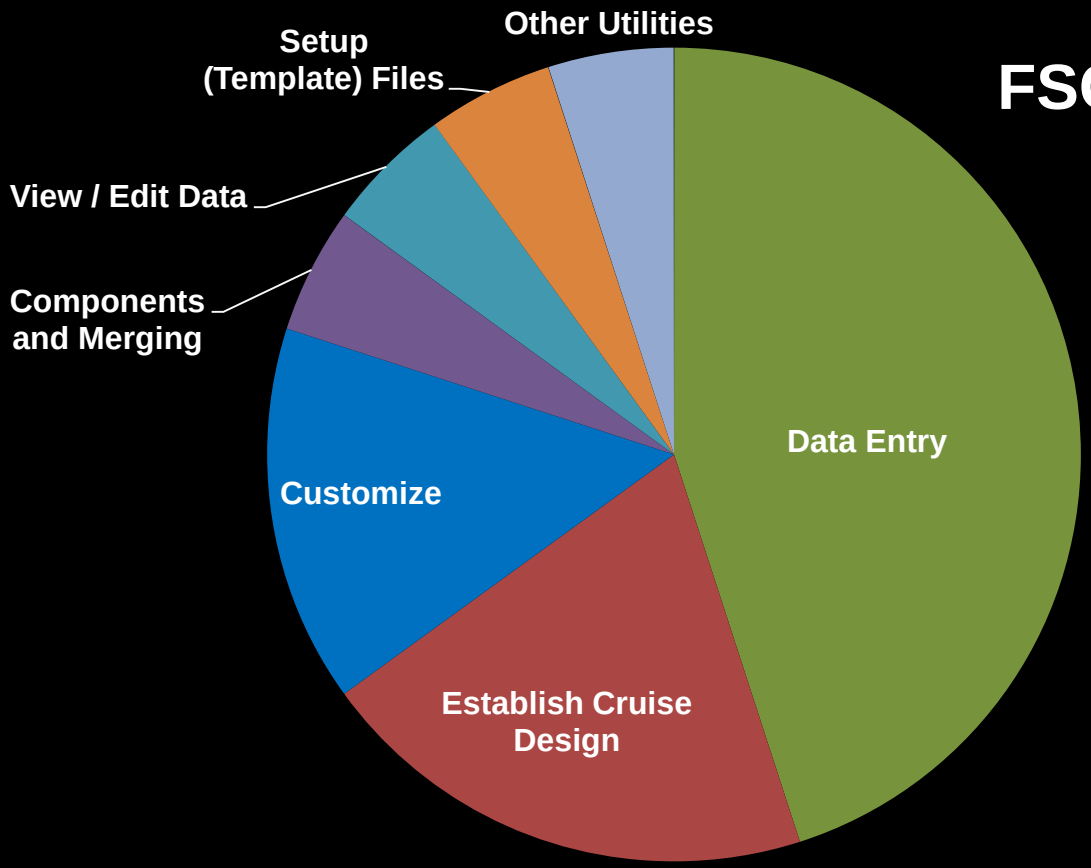
Why Re-Engineer?

- New Opportunities
  - Keep what worked
  - Re-design what didn't
  - Add new features that improve efficiency

Mobile Devices Then and Now

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

Then



FSCruiser V1

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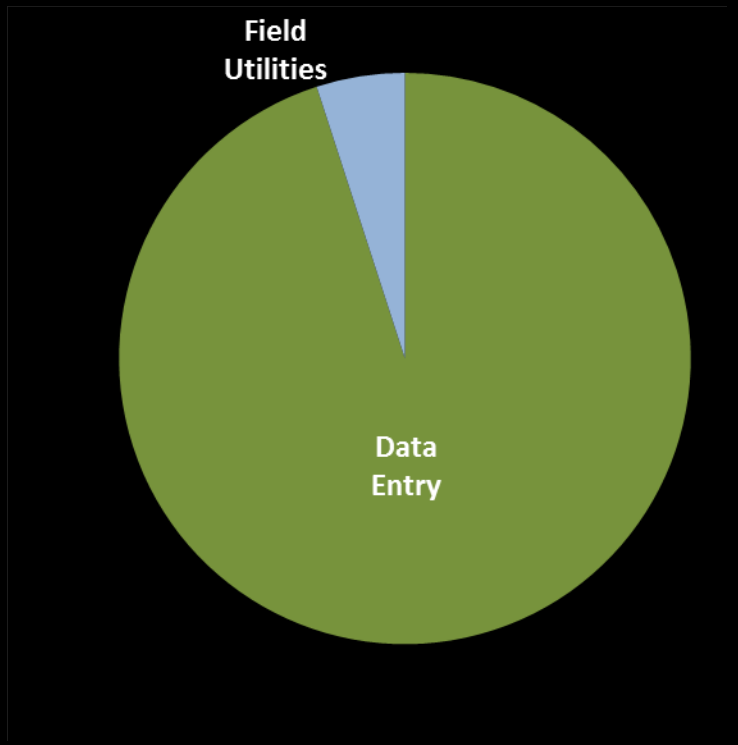
Now

FSCruiser V2



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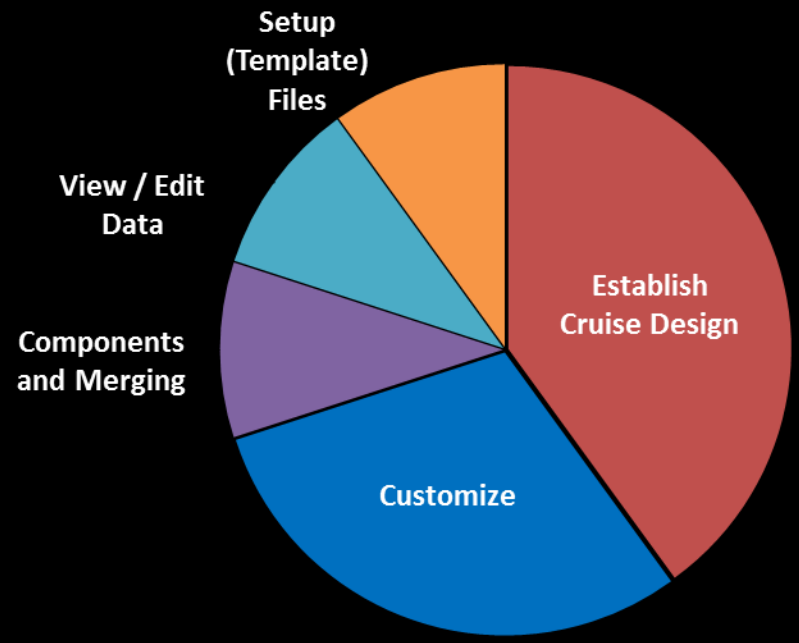
Cruise Manager



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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

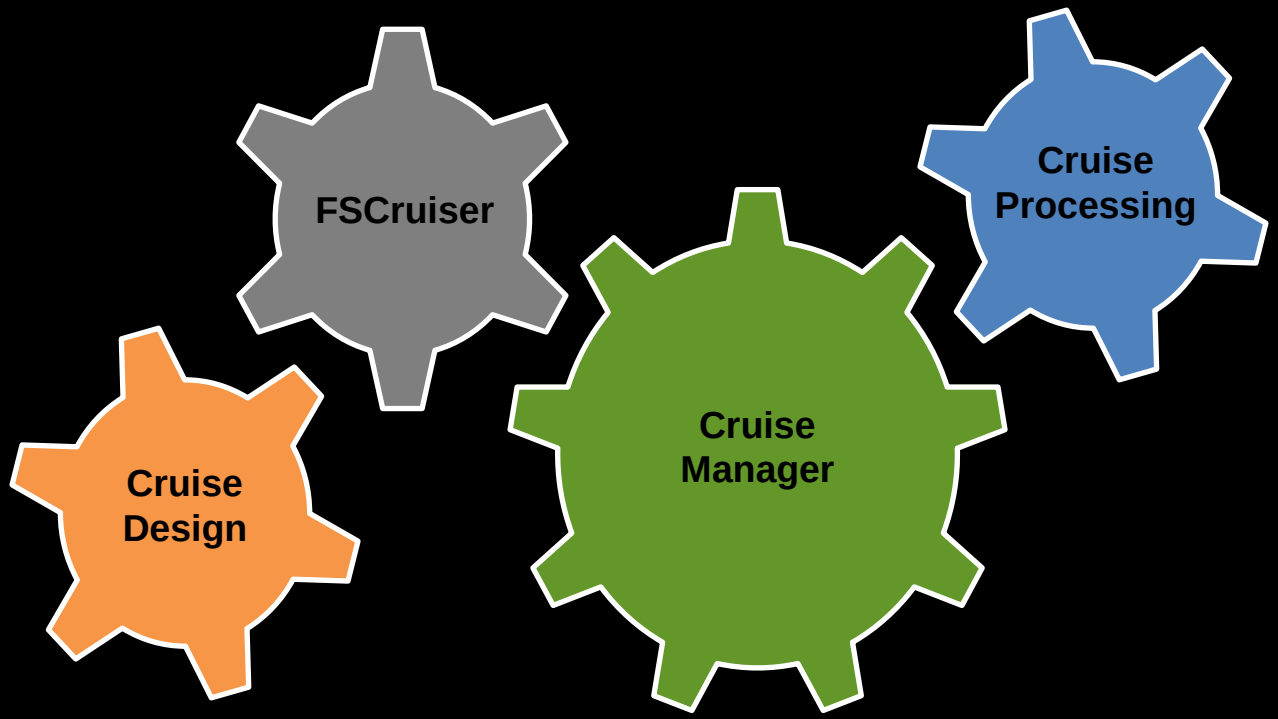
New Cruise Design

- 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



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Questions?

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Forest Biometrics & Forest Vegetation Modeling