Forest Ecosystem Science Cooperative

Electronic Data Capture Project

Egypt

Electronic Growth and Yield Plot Tallies

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EDC project

- Reasons to go to EDC
  - Data ,Data Data
    - Management
    - Validation
    - Business rules
    - Entry
    - Error checking
    - Efficiency

EDC project

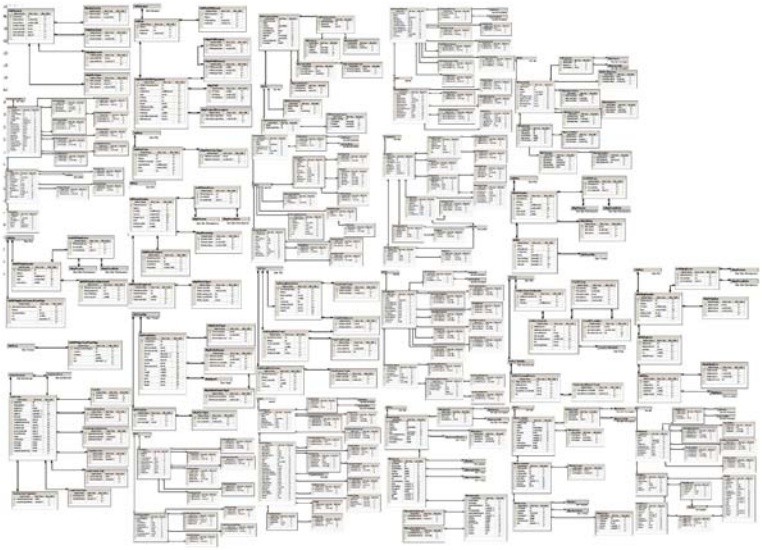
- Started 1 year ago as a collaborative project with OMNR and Sumac Forest Information Services
- WHY?

  - Taking advantage of current technology to improve the efficiency and effectiveness of data collection

EDC

In the Past…

life was simple



EDC project

Project outline

Phase One

- Create the frame of the application using ribbon technology
- Create the compact framework database to hold all of the lookup tables and empty plot data tables
- Build a data entry form for each tally sheet (location ch5, stand information ch6, photos ch8, vegetation ch9)
- Each field on the data entry form will adhere to the basic database constraints (unique value, primary key, not null etc.)
- Forms can save at any time without enforcing required fields
- Multiple forms can be in use at one time
- Create backup utility
- Regular team progress meetings
- Crew beta testing

EDC project

Project outline

Phase Two

- Create a process for querying existing plot records
- Download existing plots to compact framework database
- Download check constraints to compact framework database
- Create ability to view / edit historical data within each data entry form
- Enforce required fields
- Enforce check constraints for fields on forms where applicable
- Regular team progress meetings
- Crew beta testing

EDC project

Project outline

Phase Three

- Merge the compact framework database back to the master database
  - Simplified merge with automatic conflict resolution
  - No two users will be updating the same plot
  - Data base will be locked for each record in use by field staff
- Regular team progress meetings
- Crew beta testing

EDC project

Data Safeguards

- Automatic timed backup
- Manual backup to USB device
- Ability to restore backup
- Ability to repair the database
- All data is written to XML files to minimize access to the database
- All cells are written immediately to the XML file when changed
- Photos have thumbnails written to XML files
- Photos can be zipped and stored back to the camera
- Battery low warnings
- Ability to collect plot data without database file – Free mode

EDC project

Project Goals

- **Staged development**
  - Build by chapter of manual
  - Build in business rules
  - Build in help functions
  - Build in field validations
    - (Are you sure?)

Direct link of clean data to the database

- No time lag from field to database
- Ergo… from data to information