Electronic Recordkeeping of FRA Tests and Inspections SACP Initiative

General Project Overview

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Objectives

Electronic FRA Test and Inspection System will:

- **Enable:**
  - **Concise planning**
  - **Accurate and compliant recordkeeping**
  - **Timely employee feedback**
- **Ensure:**
  - **Consistent workflow processes**
  - **Consistent data collection and integrity**

History

- SACP identified missing FRA tests & inspections
- SACP studied availability of test time for signal maintainers
  - Reviewed methods to improve maintenance efficiency
  - Conducted field time studies
  - Compared available test time to assigned equipment
- BRS, CSX, &FRA jointly developed “Electronic FRA Record Keeping”
  - Record of required tests
  - Record of maintenance exceptions
  - Work scheduling tool
  - Elimination of hard copy records

Four Key Components

- Security
- Data Center
- Personal Mobile Tool
- Communication Infrastructure

What makes each unit secure?

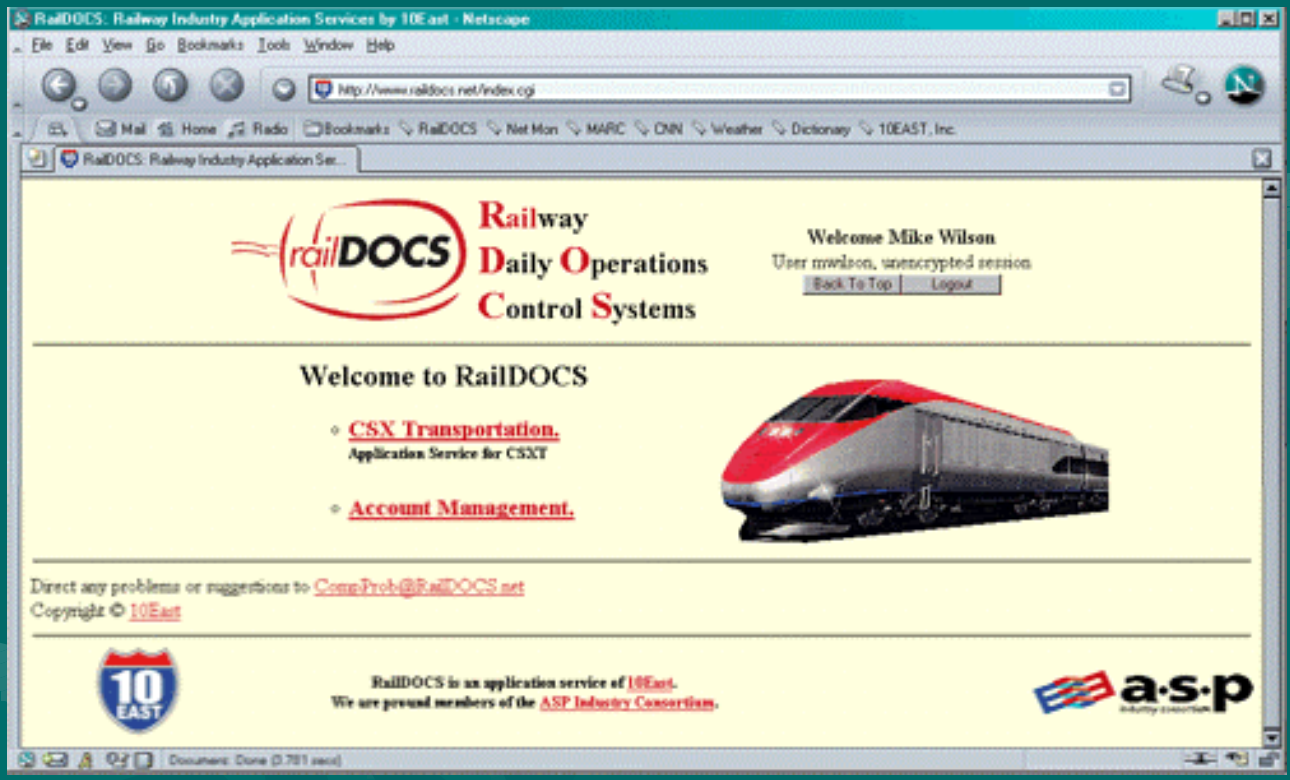
- Secure Digital™ technology
- Serialized by the SD card manufacturer
- Assigned to an individual (like a credit card or a key)

Core Component

Data center centric, Internet-based system

- Data storage
- Data correlation
- Scheduling
- Record viewing, reporting, and printing
- Automated notifications

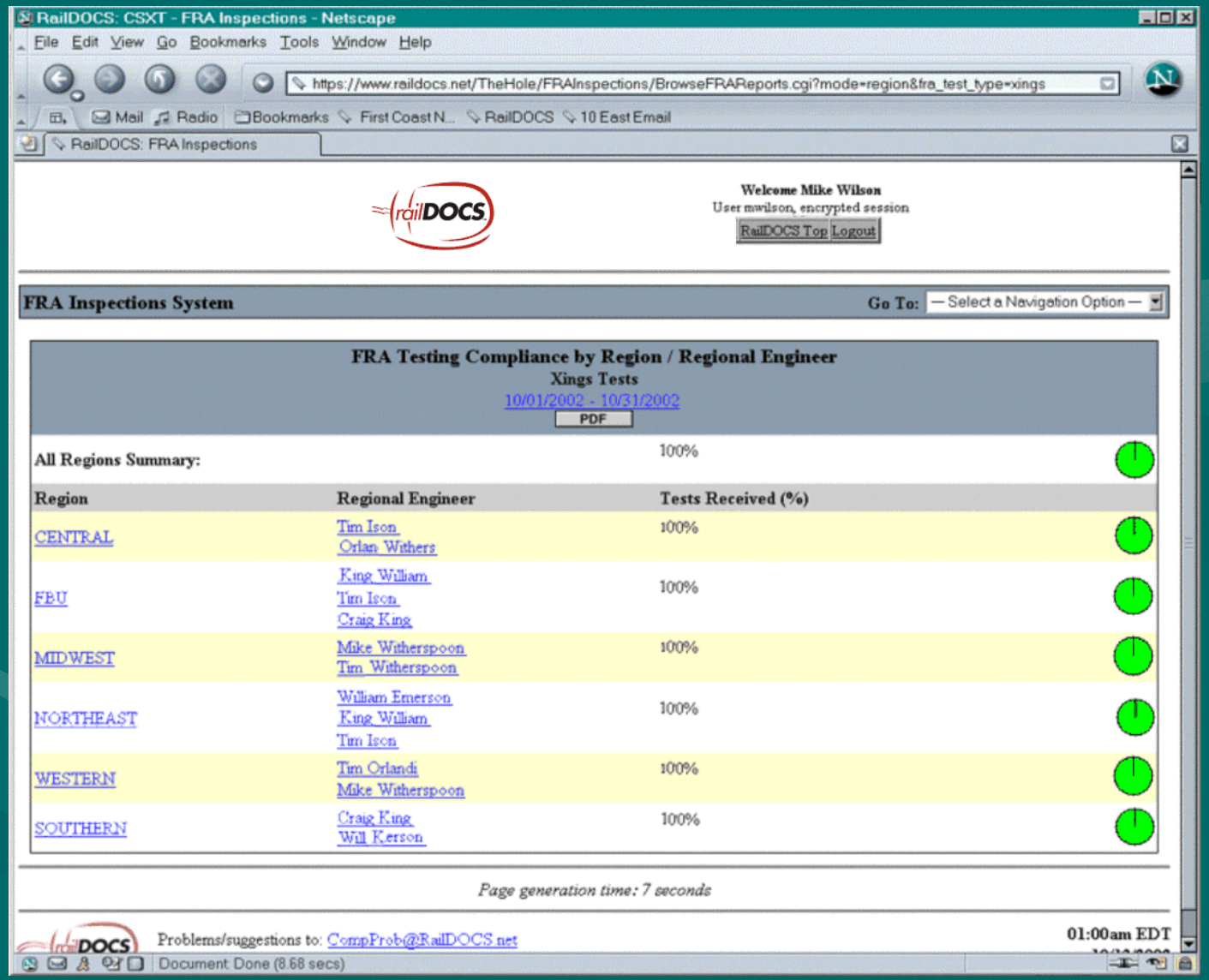
RailDOCS
CSXT'S Data Storage



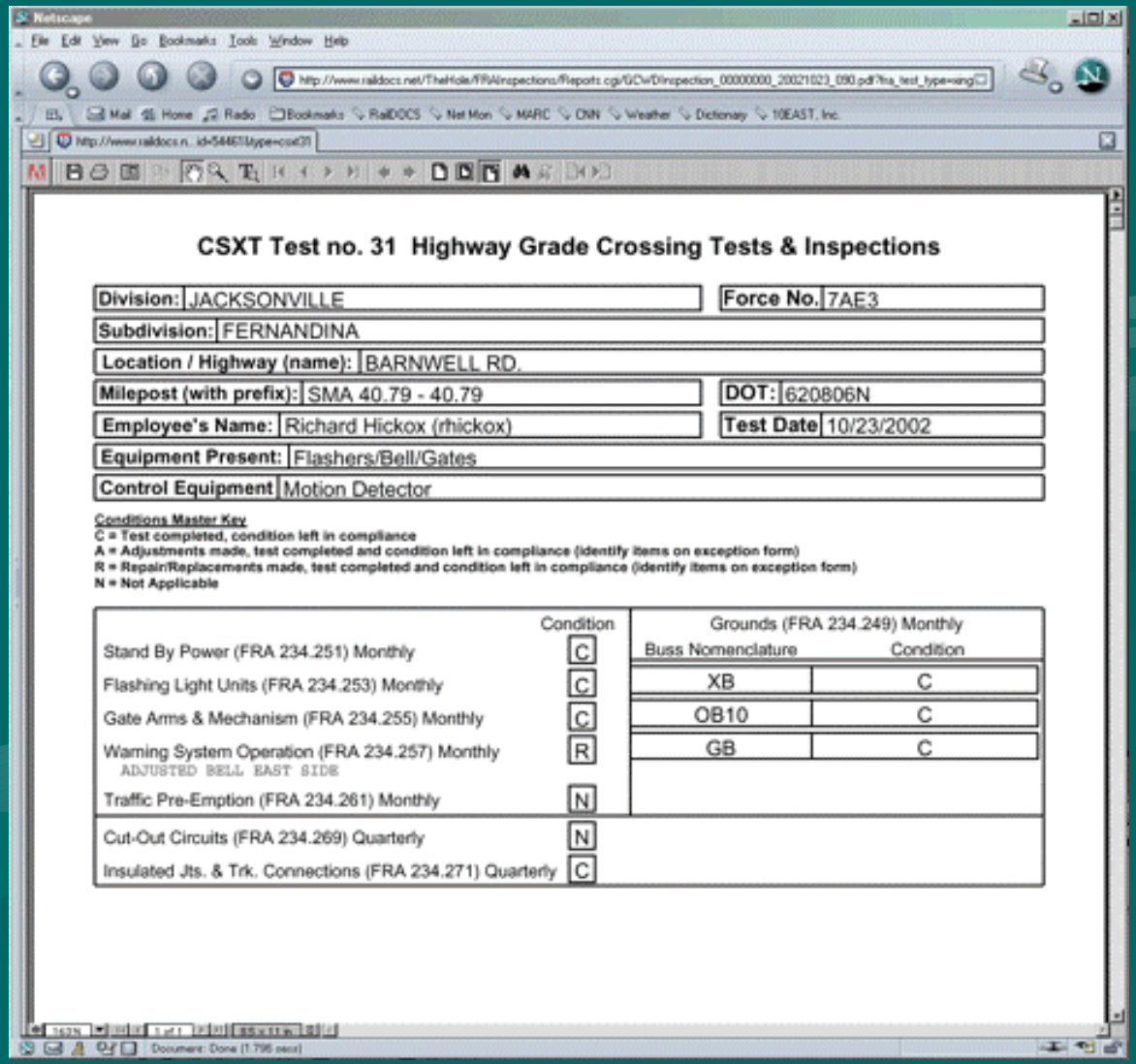
Management Reporting Structure

Region	Regional Engineer
Division	Assistant Regional Engineer
Subdivision	Signal Supervisor
Exact Location	Maintainer

Management Reporting



Test Document



CSXT Test no. 31 Highway Grade Crossing Tests & Inspections

Division:	JACKSONVILLE	**Force No.**	7AE3
Subdivision:	FERNANDINA		
Location / Highway (name):	BARNWELL RD.		
Milepost (with prefix):	SMA 40.79 - 40.79	**DOT:**	620806N
Employee's Name:	Richard Hickox (rhickox)	**Test Date**	10/23/2002
Equipment Present:	Flashers/Bell/Gates		
Control Equipment	Motion Detector		

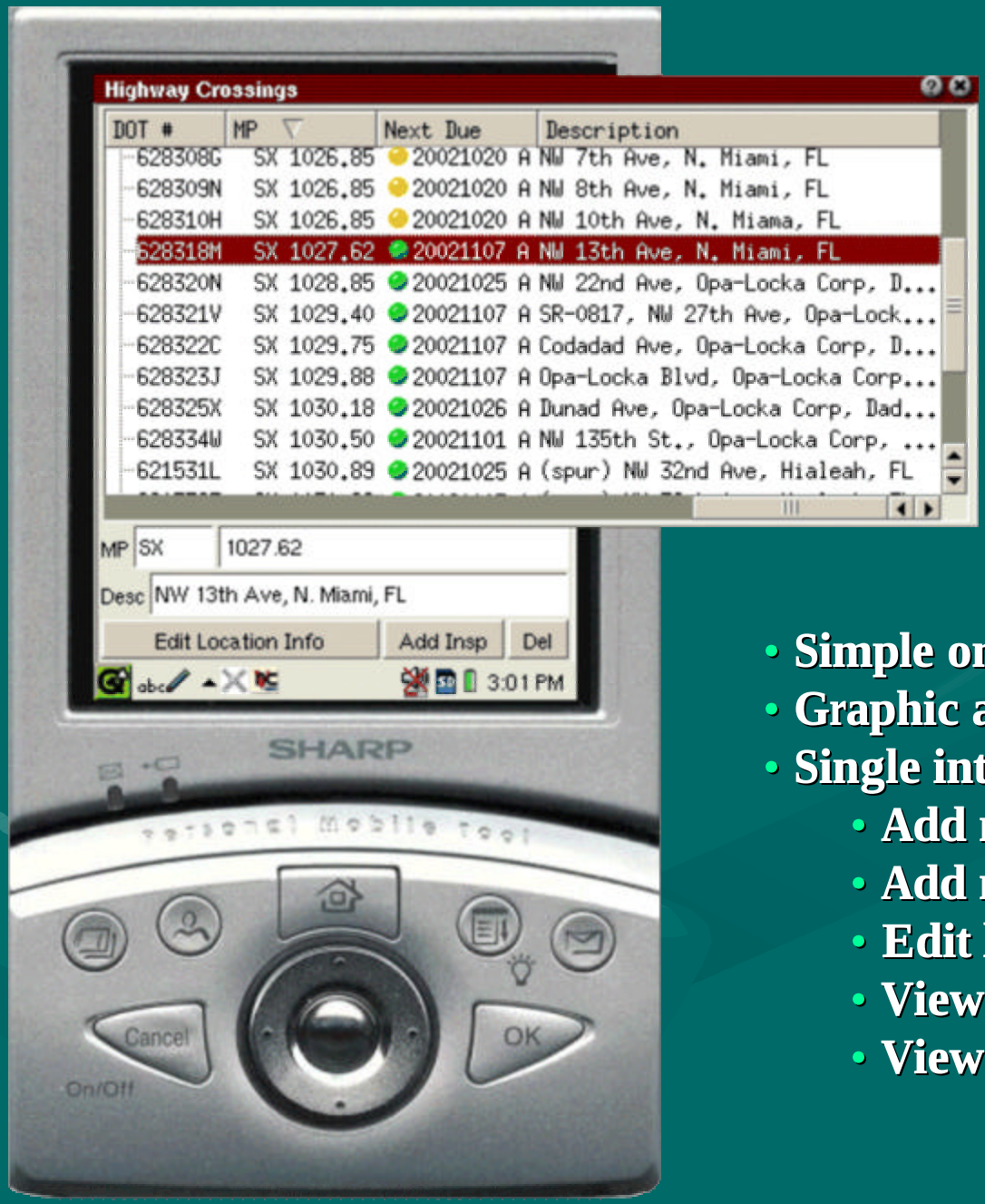
Conditions Master Key
C = Test completed, condition left in compliance
A = Adjustments made, test completed and condition left in compliance (identify items on exception form)
R = Repair/Replacements made, test completed and condition left in compliance (identify items on exception form)
N = Not Applicable

	Condition	Grounds (FRA 234.249) Monthly	
		Buss Nomenclature	Condition
Stand By Power (FRA 234.251) Monthly	C	XB	C
Flashing Light Units (FRA 234.253) Monthly	C	OB10	C
Gate Arms & Mechanism (FRA 234.255) Monthly	C	GB	C
Warning System Operation (FRA 234.257) Monthly ADJUSTED BELL EAST SIDE	R		
Traffic Pre-Emption (FRA 234.261) Monthly	N		
Cut-Out Circuits (FRA 234.269) Quarterly	N		
Insulated Jts. & Trk. Connections (FRA 234.271) Quarterly	C		

Field Component

PMT – Personal Mobile Tool

- Drives the workflow process
- Provides the highest level of accuracy and integrity to test and inspection data
- Provides users immediate feedback regarding incorrect information
- Maintains visibility of required FRA Tests and Inspections

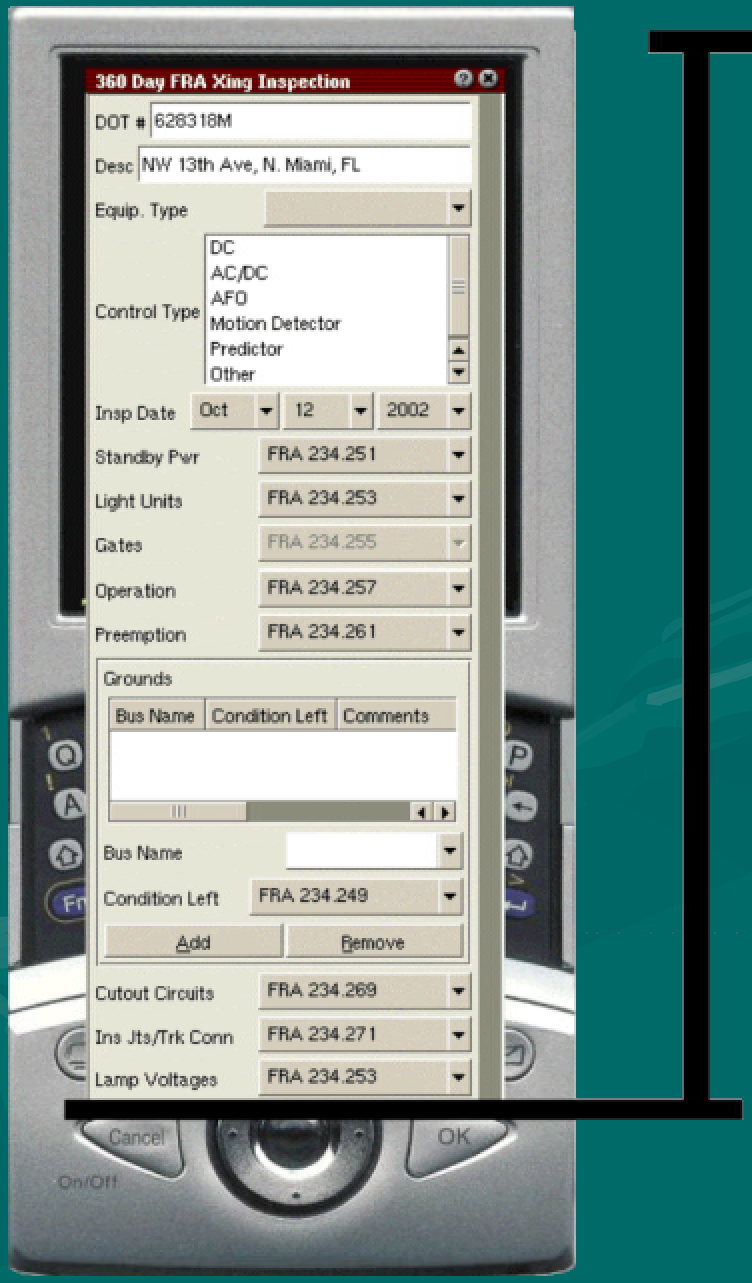


Intuitive Interface

- Simple one-key data sorting
- Graphic and text-based information
- Single interface enables user to:
  - Add new locations
  - Add new tests
  - Edit location information
  - View tests completed
  - View tests that need to be done

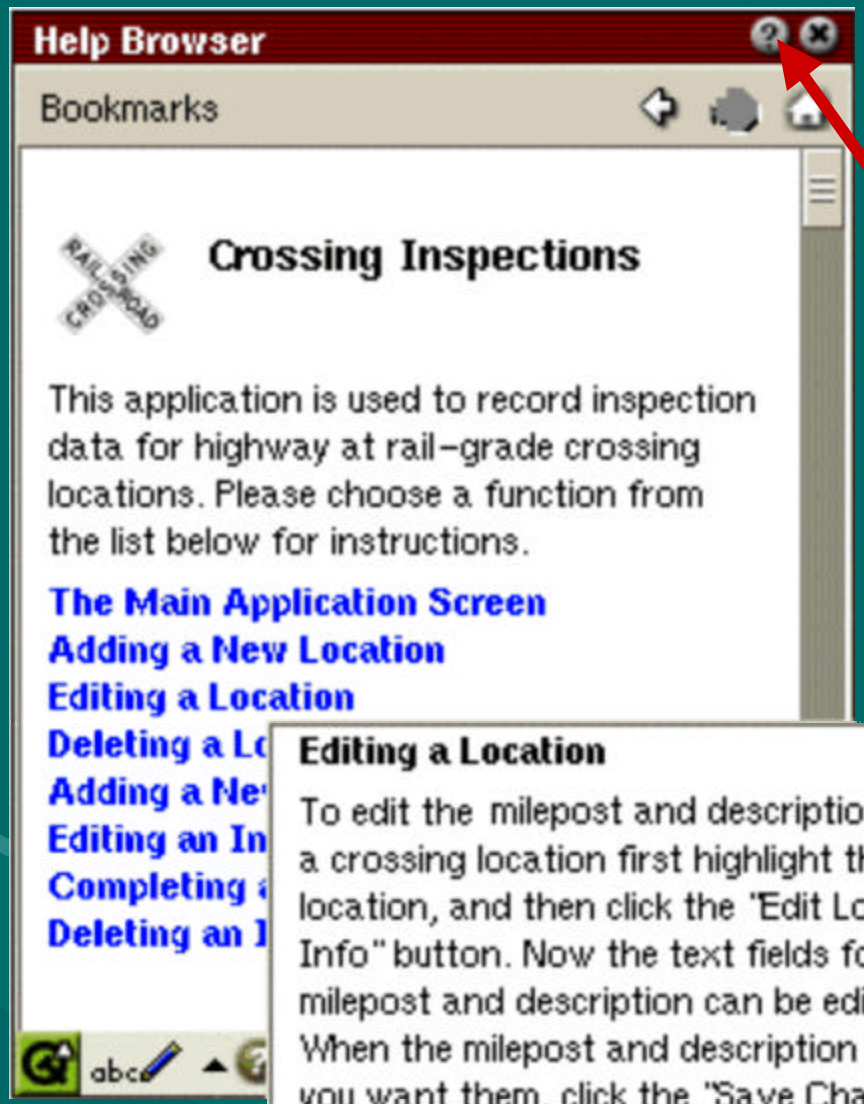
Typical Form

- Selection boxes
- Drop down lists
- Minimum input required
- Dependencies
- Error checking
- Immediate user feedback



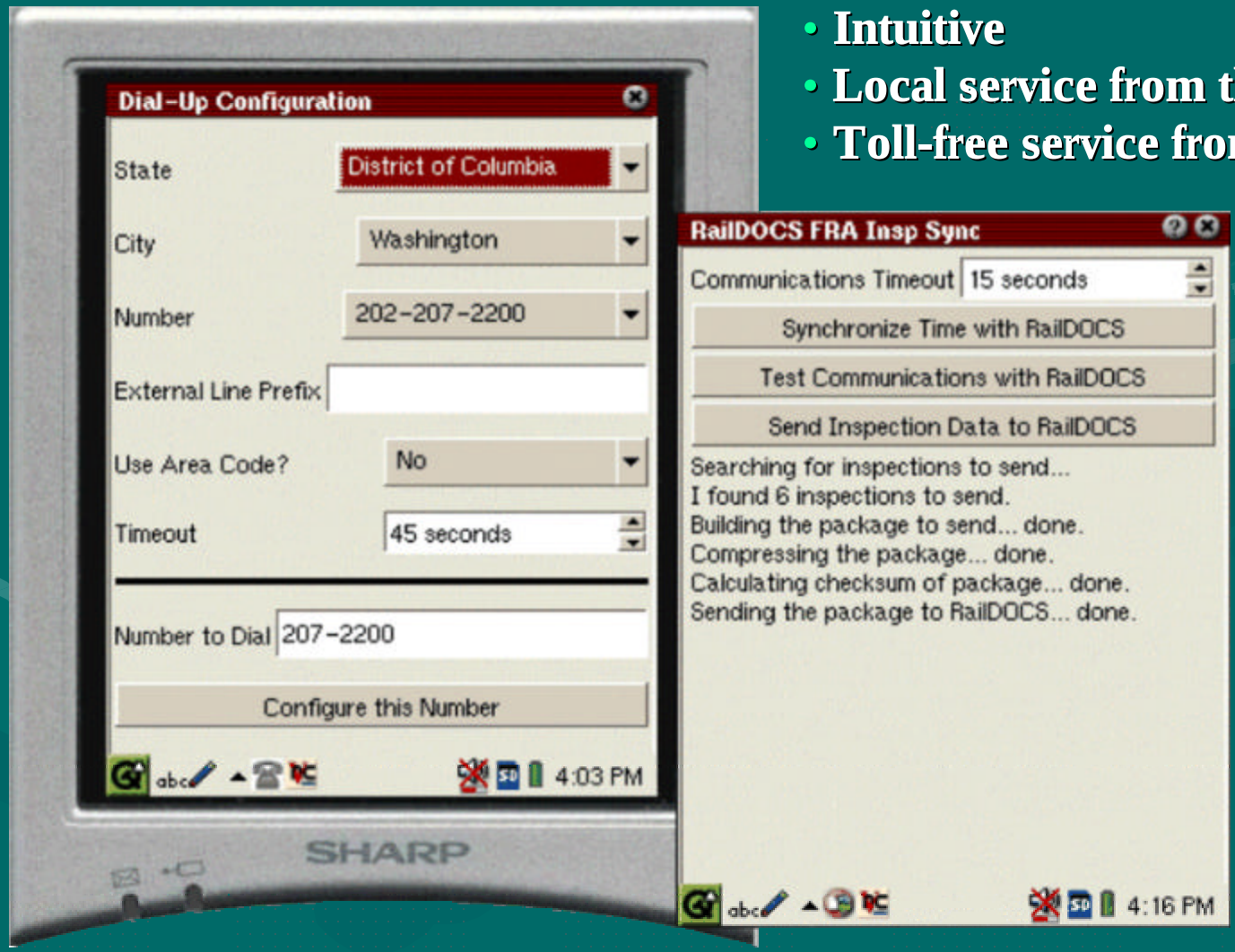
Interactive Help System

No need to carry around additional reference material. Simple "linked" help system enables the user to find information quickly and easily.



Communication Interface

- Simple
- Intuitive
- Local service from thousands of cities
- Toll-free service from any US location



Inspectable Asset ID

- Uses the DOT Number formula as the model
  - 6 characters plus checksum letter
- Plan to deploy this on all inspectable assets
  - Ensures discreet numbers for all assets
  - Railroad independent

Pilot Project Status

- **Cross functional team met in Jacksonville, Florida April 16th**
  - **Floyd Mason & Gus Demott (BRS)**
  - **Mike Choat & Craig King (CSXT)**
  - **Bill Goodman, Jim Bush, Michael Woods, Bob Scieszinski & Mark Jones (FRA)**

Working issues

- FRA waiver condition of requirement to download tests within 24 hours
  - CSXT to ask for reconsideration to allow for next business day download
- Continuing work to finalize operations & training manual
  - Complete within 30 days
- Continue to ensure that security concerns, if any arise, are promptly addressed
- Petition the FRA for written interpretation of what time frame constitutes monthly, quarterly and annual tests
- Provide ability to make interim tests with no impact to work schedule
- Add signal construction foremen to pilot program

Pilot Project Status Continued

- Southern Region (excluding FBU)
  - 275 Units Deployed
  - Approximately 50,000 Test Forms Collected
  - 380,504 Completed Tests Collected
- Zero Software Failures
- 10 Hardware Failures
- No Security Issues
- Peer Training Completed for All 275 Employees

Pilot Project Status Continued

- **Tests and Inspections Currently Supported**
  - **Crossing Monthly, Quarterly, and Annual**
  - **Grounds**
  - **Timing**
  - **Switches**
- **Tests and Inspections Under Development**
  - **Relays**
  - **Locking**
  - **Electric Lock**
  - **Searchlight**
  - **Cable**

Questions