turning knowledge into practice

Using the Blaise Component Pack for All Stages of Data Collection

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Introduction

- Blaise Component Pack (BCP) at RTI International:
  - Creating alien routers
  - Processing data through the entire survey lifecycle
- Custom applications:
  - *Screener Selection* -- to select eligible children
  - *Create Cases* -- to spawn a new case
  - *Fingerstick Timer* -- to help collect bloodspots
  - *Bio-Tracking System* -- to track events associated with bloodspots and saliva collection
  - *Generate Mandatory Report* -- to flag special cases and generate report

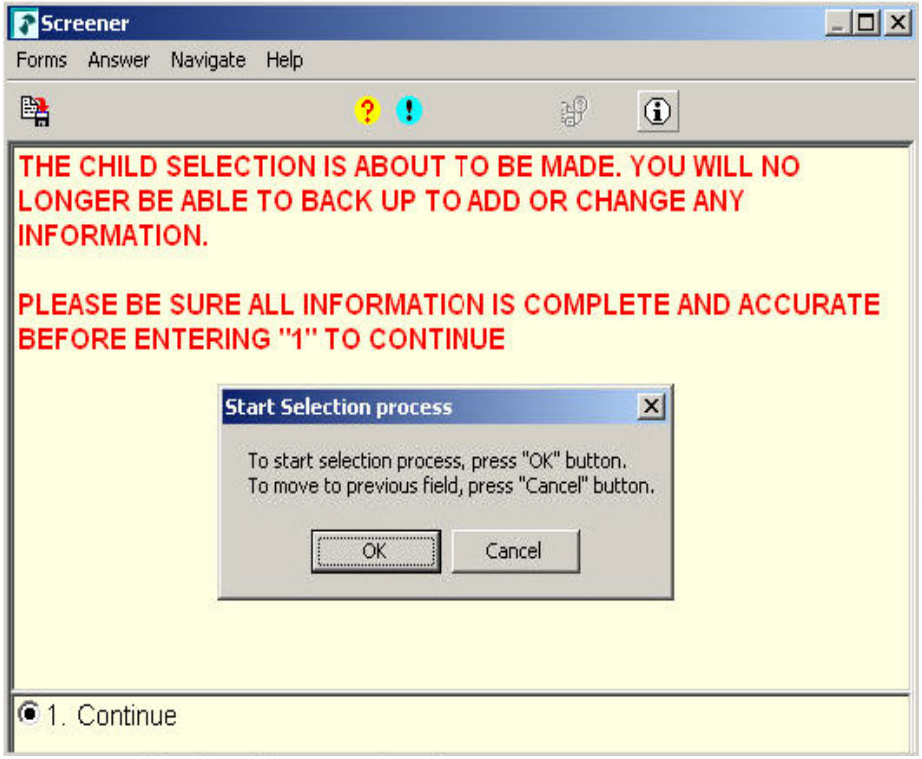
Screener Selection

- Screener Interview:
  - Utilizes a large amount of preload data about children
  - Collects new data
  - Runs series of algorithms to select eligible children
- Selection algorithms:
  - Dividing children among three groups
  - Sorting by age in one of the groups
  - Selecting up to two children by age and/or randomization
- Screener Selection - A Visual Basic alien router to select eligible children

Screener Selection

Arrays in Blaise instrument:

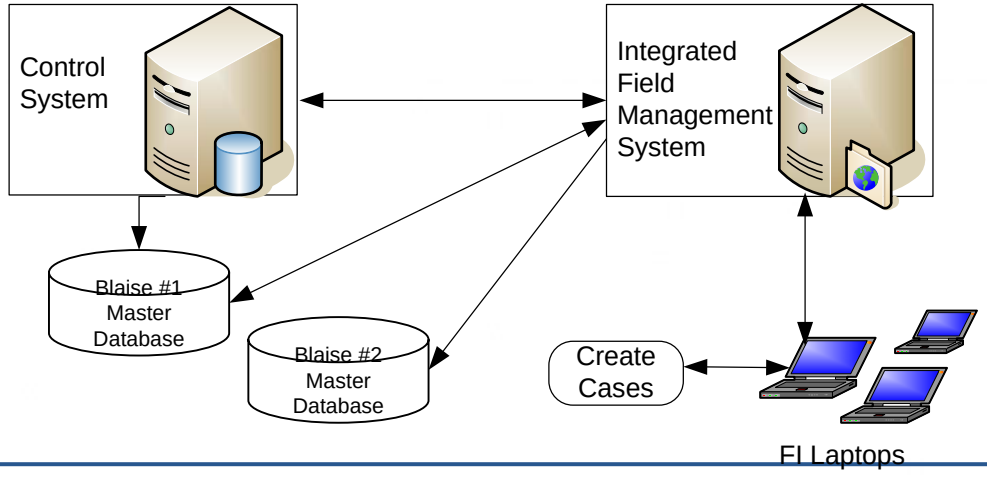
- ChildArray[1..13] – passed to the alien router with info collected in interview
- SelectedChildren[1..2] – outputted information about selected child/children
- OutChildArray[1..13] – outputted from the alien router with sorted records



Create Cases

Overview of Spawning Process

- Case Management System (CMS) - used on Field Interviewer (FI) laptops to launch interviews and update case status
- Integrated Field Management System (IFMS) - used to assign and transfer cases
- Control System (CS) - used by authorized staff to monitor the flow of data during data collection
- Create Cases - Manipula setup used by the CMS to spawn new cases



Create Cases

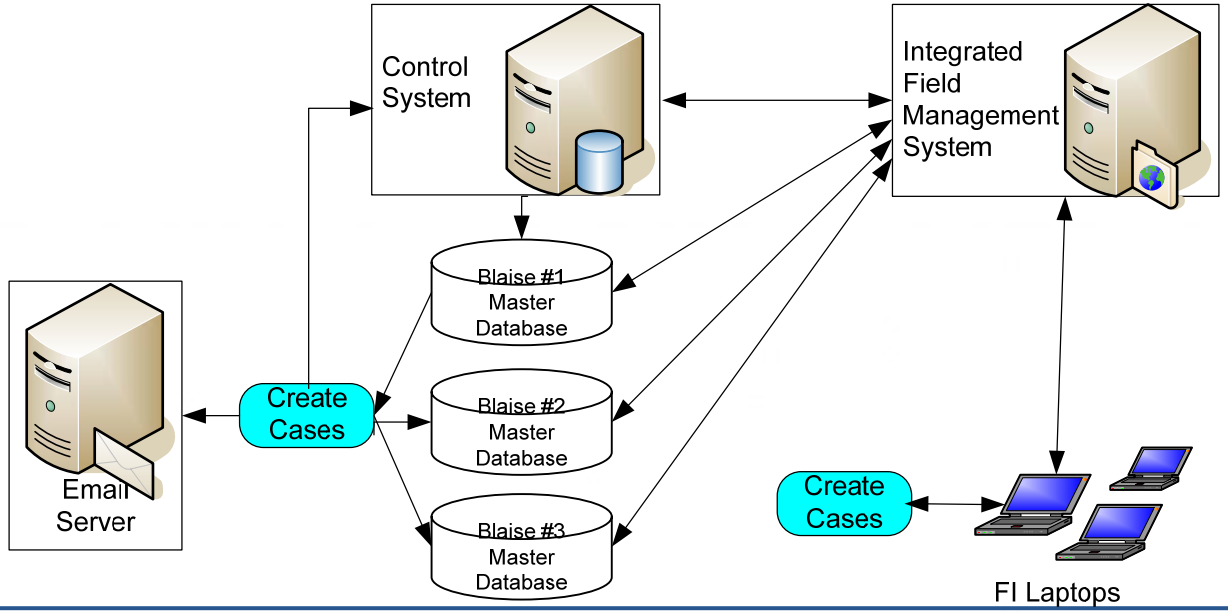
Visual Basic Application

- Requirements to create new case:
  - Immediately upon completion of the screener if no child selected
  - At RTI in centralized Blaise databases if child/children selected
- Create Cases modes:
  - Spawn an interview immediately on FI laptop if desired
  - Spawn interviews at RTI, produce special output files, and trigger email
  - Combination of two modes to spawn any appropriate interviews during FI training

Create Cases

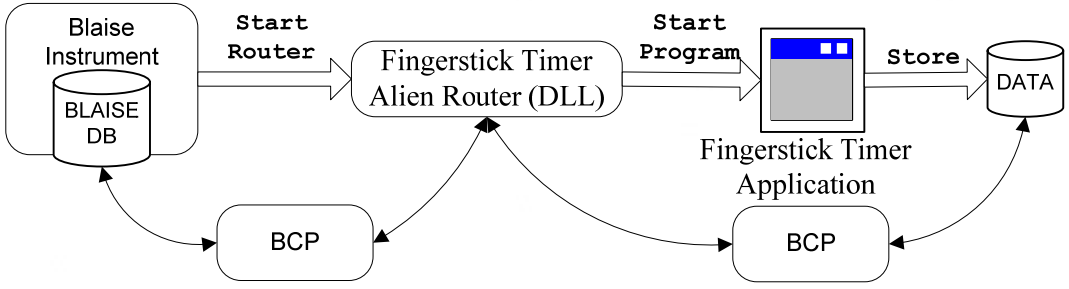
Manipula vs. VB Application with the BCP

- Access information in Blaise databases independently of data model versions
- Use common VB code and classes to trigger email
- Simplify debugging during the development stage



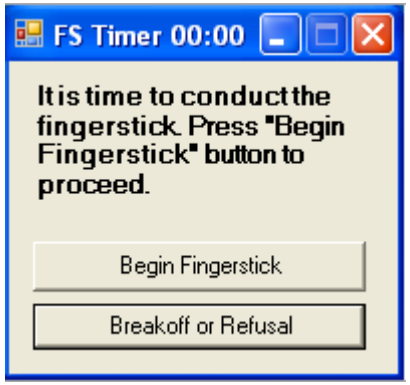
Fingerstick Timer

- .Net alien router and Windows application - help to collect three blood samples (“fingersticks”) during the CAPI interview
- Alien router – starts application and writes collected data into Blaise database
- Windows application - runs timers to remind interviewers to collect each blood sample and stores timing data into a text file



Fingerstick Timer Application

- Displays a pop-up window every twenty minutes
- Enables Break-off of the blood sample collection
- Minimizes itself
- Records several date and time data points:
  - Timer started
  - Pop-up window presented
  - Fingerstick started
  - Fingerstick completed



Bio-Tracking System

Importing Field Data

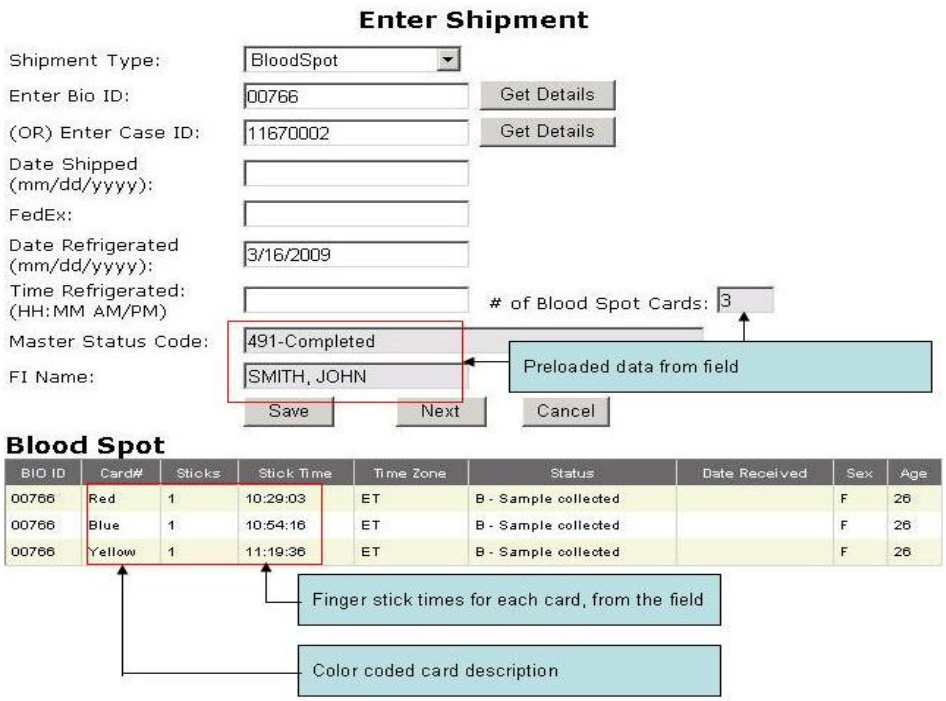
- Application to track events associated with bloodspots and saliva collection, shipment, receipt, and reporting
- Load BTS – .Net utility program to process collected data:
  - Exports more than 100 fields from the Blaise databases
  - Loads one record for saliva and up to three records for bloodspots
  - Assigns status code for each of the samples

```
//Open Blaise Database
     BlAPI4A2.Database db = dbMgr.OpenDatabase(SourceDB);
    db.AccessMode = BlAccessMode.blamShared;
    db.Connected = true;
...
//Read Fingerstick Timer data
Time1 = db.get_Field("FngTmrResults.FngTmrResultsData[1].FSTimerEnd").Text;
Time2 = db.get_Field("FngTmrResults.FngTmrResultsData[2].FSTimerEnd").Text;
Time3 = db.get_Field("FngTmrResults.FngTmrResultsData[3].FSTimerEnd").Text;
```

Bio-Tracking System

Using Field Data

- Shipment information is entered at RTI
- Receipt date and results are entered at Labs
- Field data helps:
  - Simplify data entering
  - Verify information from the field

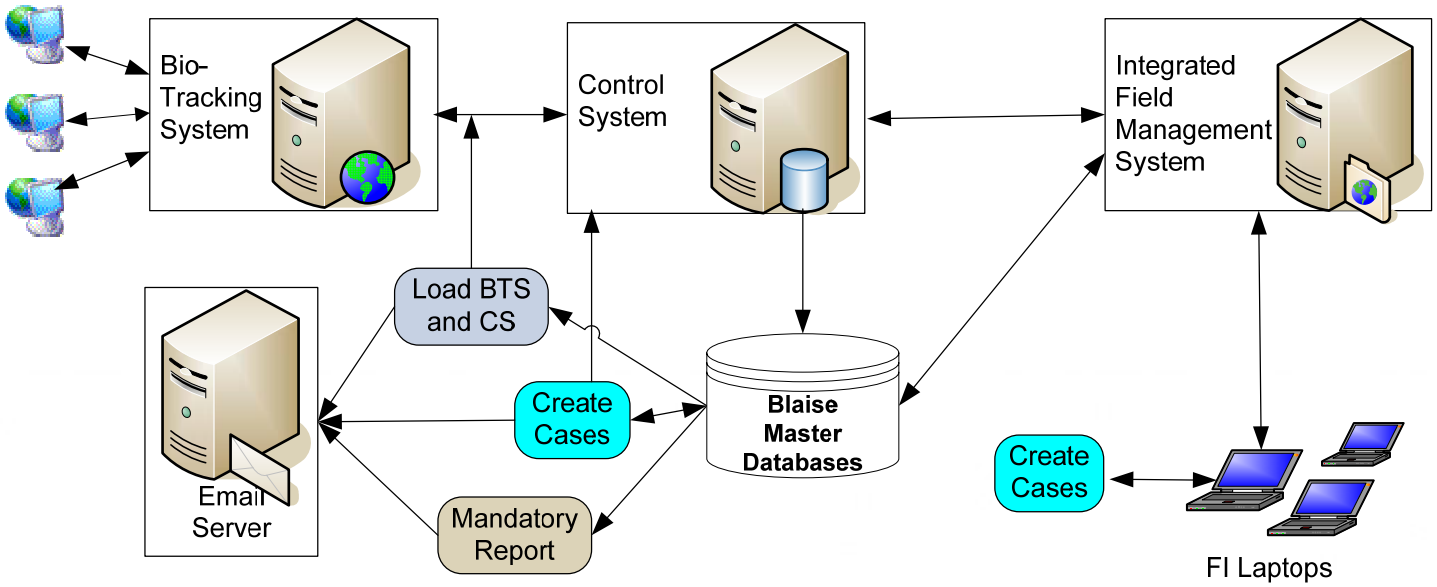


Generate Mandatory Report

- Application to flag cases based on responses to certain questions during the CAPI interview
- 71 questions trigger a series of follow-up questions
- 538 variables to process for creating the report
- Send an email for flagged cases to responsible staff within 24 hours of the case completion
- Create variable names on the fly to process events

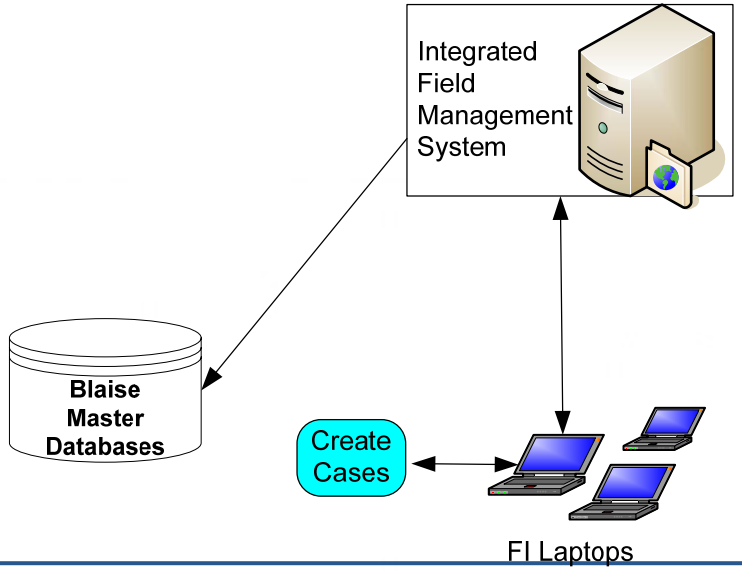
THL - TCM52 - child ever physically abused - 1 (Yes)
THL - TCM521a - age when this happened - 11
THL - TCM521b1 - perpetrator - acquaintance - female - adult
THL - TCM521c - number times this person did this - 2

Data Flow Between the Systems



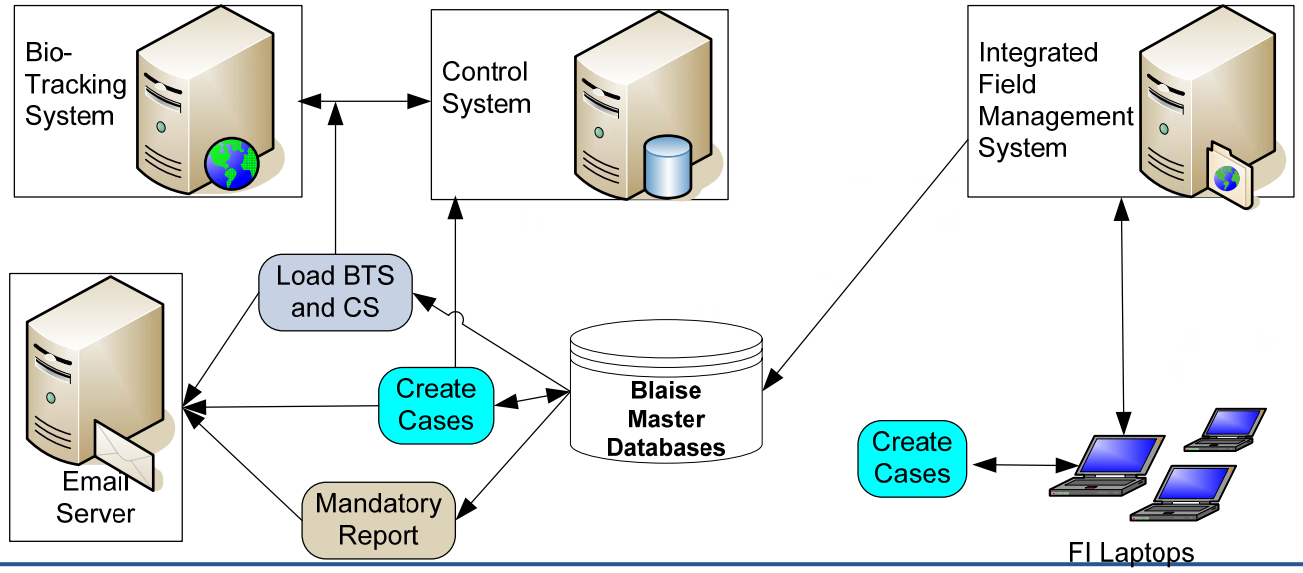
Overnight Process

- Loads cases from FI laptops into Blaise Master databases



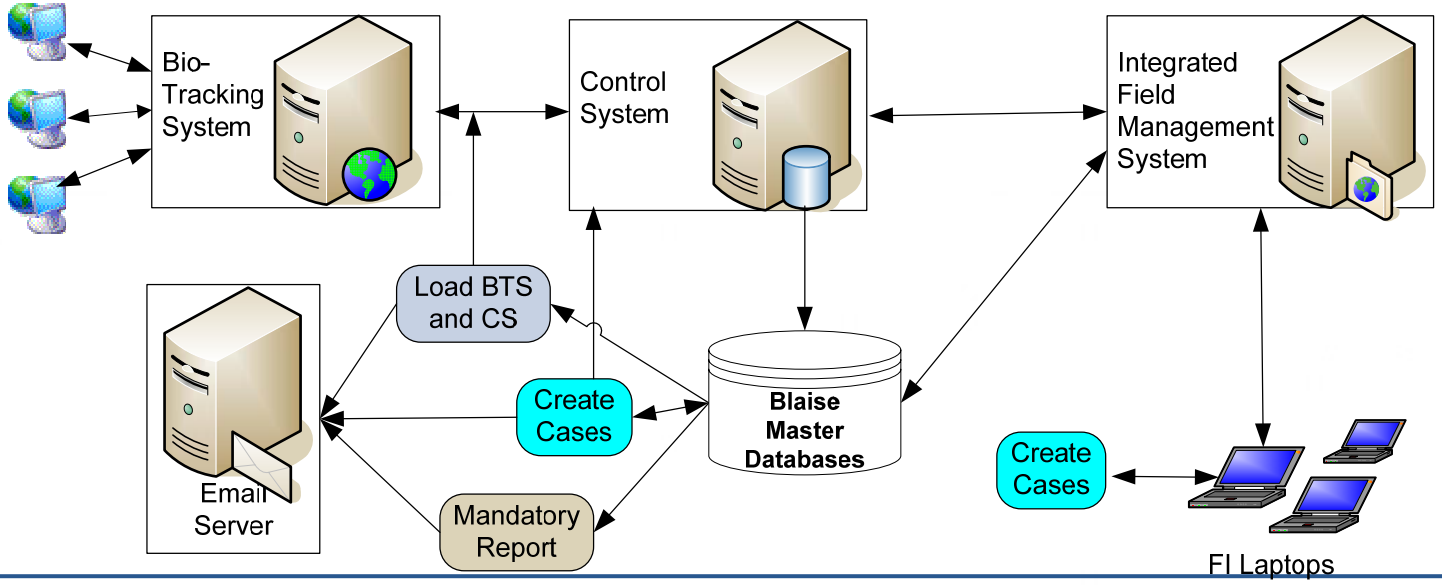
Overnight Process

- Loads cases from FI laptops into Blaise Master databases
- Runs custom applications to process the data and send emails to appropriate staff



Overnight Process

- Loads cases from FI laptops into Blaise Master databases
- Runs custom applications to process the data and send emails to appropriate staff
- Makes newly created cases available in IFMS for transmitting to FI laptops



Summary

- The BCP helps make data collection efficient and accurate
- Advantages of using the BCP:
  - Reduction in programming time to pass data from Blaise into SQL Server databases
  - Fast programming of complicated tasks like randomization
  - Ease of adding already tested common classes and functions
  - Effortless learning for experienced VB and .Net programmers
  - Ease of debugging applications in VB and .Net