

BLAISE 5 MULTIMODE MANAGEMENT

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Sharing your passion for accurate, efficient surveys!

BCLUB Multimode Management Group

- Office for National Statistics (ONS): Mike Hart
- RTI: R. Suresh, Gilbert Rodriguez, and Lilia Filippenko
- UK National Centre for Social Research: Sven Sjodin, Nafiis Boodhumeah, and Colin Miceli
- Statistics Norway: Hilde Degerdal, Trond Båshus, and Jan Haslund
- University of Michigan, Survey Research Center: Patty Maher – lead.
- Westat: Richard Frey
- Social & Scientific Systems, Inc.: Ans Bilhorn-Janssens, and Taylor Abernathy
- Statistics Netherlands: Lon Hofman and Tim Carati

Two institutes described their use of Blaise 4 CATI. They are

- Statistics Denmark, Leif Bochis
- National Agricultural Statistics Service, Emily Caron

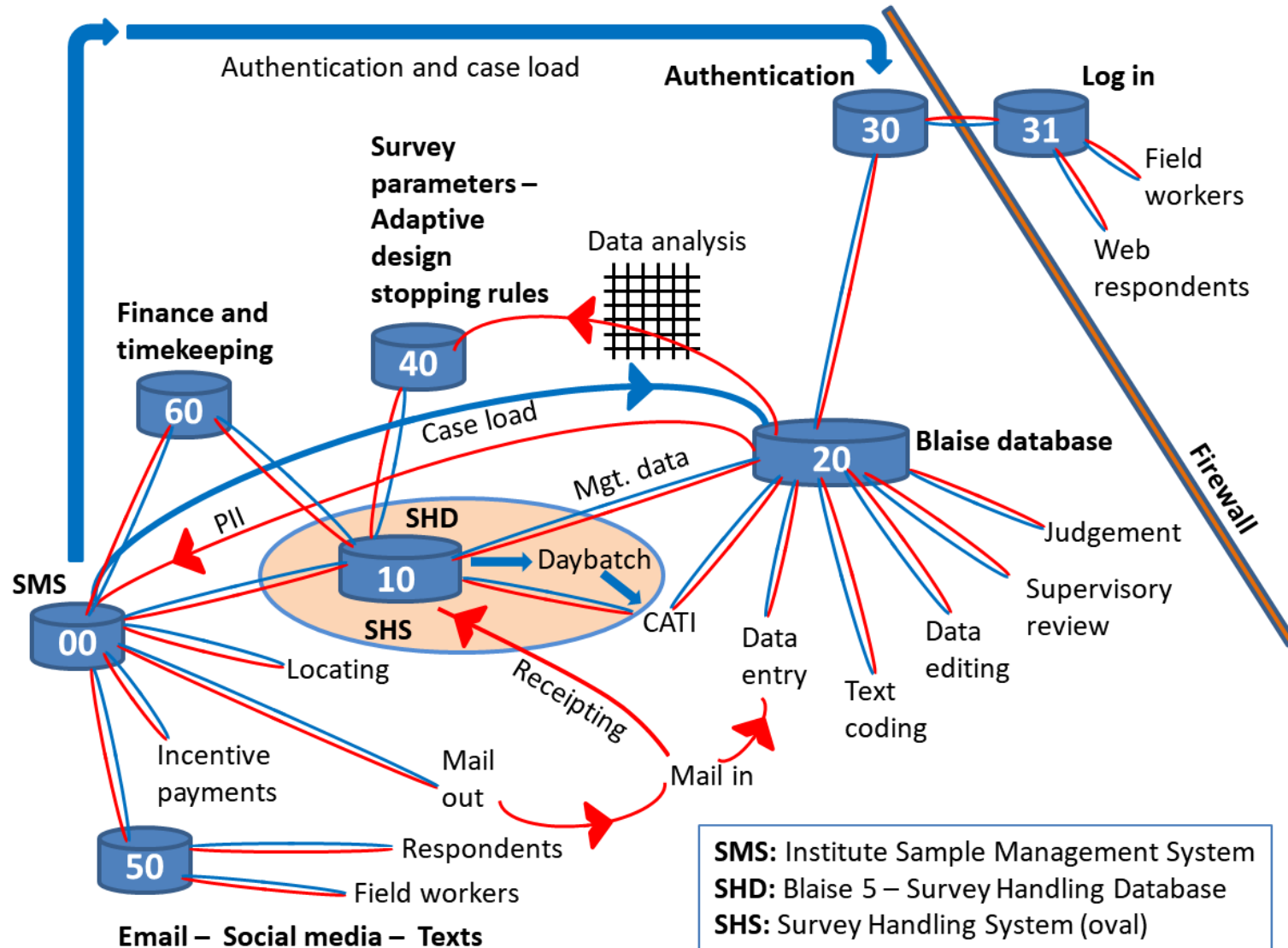
BCLUB Multimode Management Group

- Worked from October 2017 to August 2018
 - With gaps
- Three rounds of questions from MMPSS to group
- Confidential report and detailed responses
 - Kept with Team Blaise and the BCLUB
- A condensed summary report is in the proceedings
- This talk represents a possible Blaise 5 future

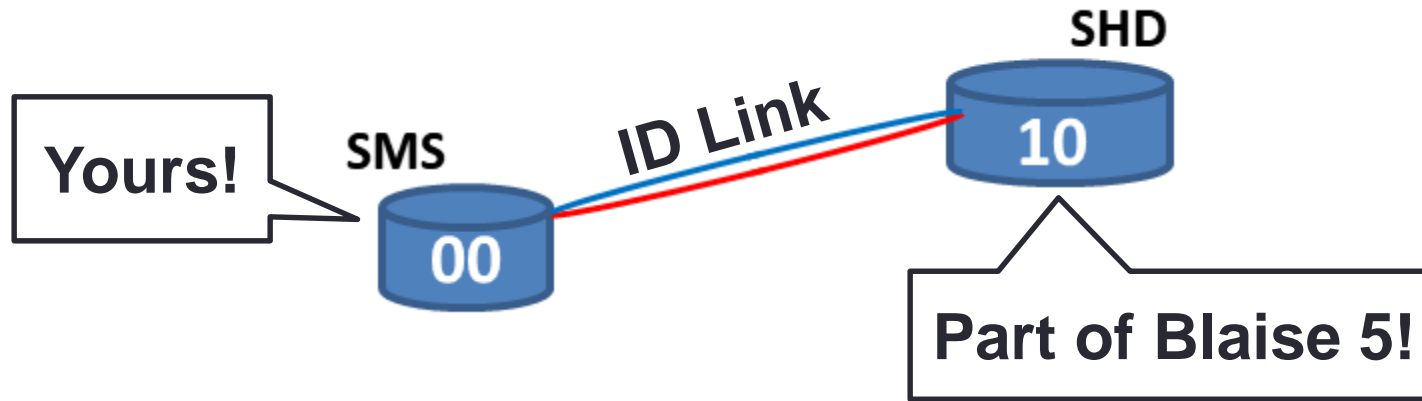
Goals of Blaise 5 Multimode Management

- Truly generalised system
 - Different countries
 - Different practices
 - Different coding schemes
- Easy!
- Includes the latest survey management methods
- Complexity – next slide

Idealized Multimode Management System



The SMS and the SHD



- A Relational Database or perhaps a simple spreadsheet
- Contains PII and sample information
- May have utilities such as email, locating, printing labels, etc.
- Blaise 5 should not duplicate this
- For the prototype, this is an Excel spreadsheet in .csv format
- A Blaise 5 database
- Has NO PII
- Has indicators
- Maintains counts and statuses
- You could give a copy of this database to a client; because it has NO PII
 - Also, no staff identifiers

The SMS and the SHD



Base records

| Unit | CaseID | FirstName | LastName | Gender | Age | Address1 |
|-------|--------|-----------|----------|--------|-----|------------------------|
| 10001 | 1 | Oscar | Opossum | Male | 25 | 234 Serendipity Street |
| 10002 | 1 | Bernie | Bear | Female | 55 | 832 Dragonboat Drive |
| 10002 | 2 | Bernice | Bear | Female | 56 | 832 Dragonboat Drive |
| 10003 | | Fannie | Fox | Female | 19 | 15 Larkspur Lane |

Base records

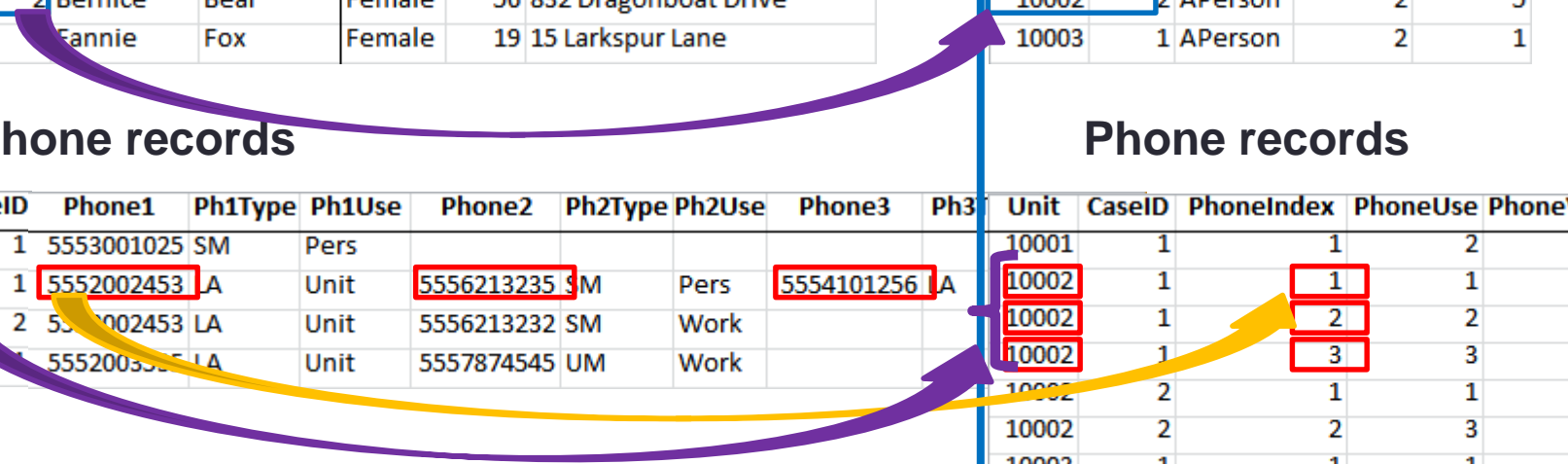
| Unit | CaseID | CRType | Domain1 | Domain2 |
|-------|--------|---------|---------|---------|
| 10001 | 1 | APerson | 1 | 2 |
| 10002 | 1 | APerson | 2 | 5 |
| 10002 | 2 | APerson | 2 | 5 |
| 10003 | 1 | APerson | 2 | 1 |

Phone records

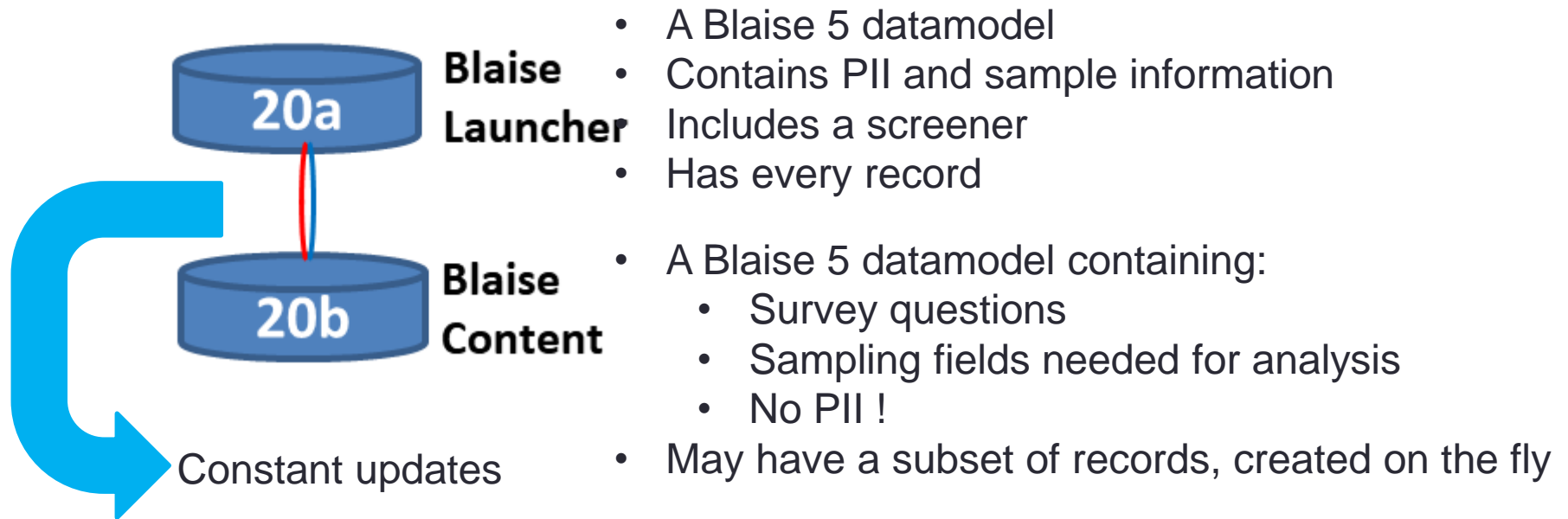
| Unit | CaseID | Phone1 | Ph1Type | Ph1Use | Phone2 | Ph2Type | Ph2Use | Phone3 | Ph3 |
|-------|--------|------------|---------|--------|------------|---------|--------|------------|-----|
| 10001 | 1 | 5553001025 | SM | Pers | | | | | |
| 10002 | 1 | 5552002453 | A | Unit | 5556213235 | SM | Pers | 5554101256 | A |
| 10002 | 2 | 5552002453 | LA | Unit | 5556213232 | SM | Work | | |
| 10003 | 1 | 5552003325 | LA | Unit | 5557874545 | UM | Work | | |

Phone records

| Unit | CaseID | PhoneIndex | PhoneUse | PhoneValidity |
|-------|--------|------------|----------|---------------|
| 10001 | 1 | 1 | 2 | 3 |
| 10002 | 1 | 1 | 1 | 3 |
| 10002 | 1 | 2 | 2 | 3 |
| 10002 | 1 | 3 | 3 | 3 |
| 10002 | 2 | 1 | 1 | 3 |
| 10002 | 2 | 2 | 3 | 3 |
| 10003 | 1 | 1 | 1 | 3 |
| 10003 | 1 | 2 | 3 | 3 |



Blaise Launcher and Topic Datamodels

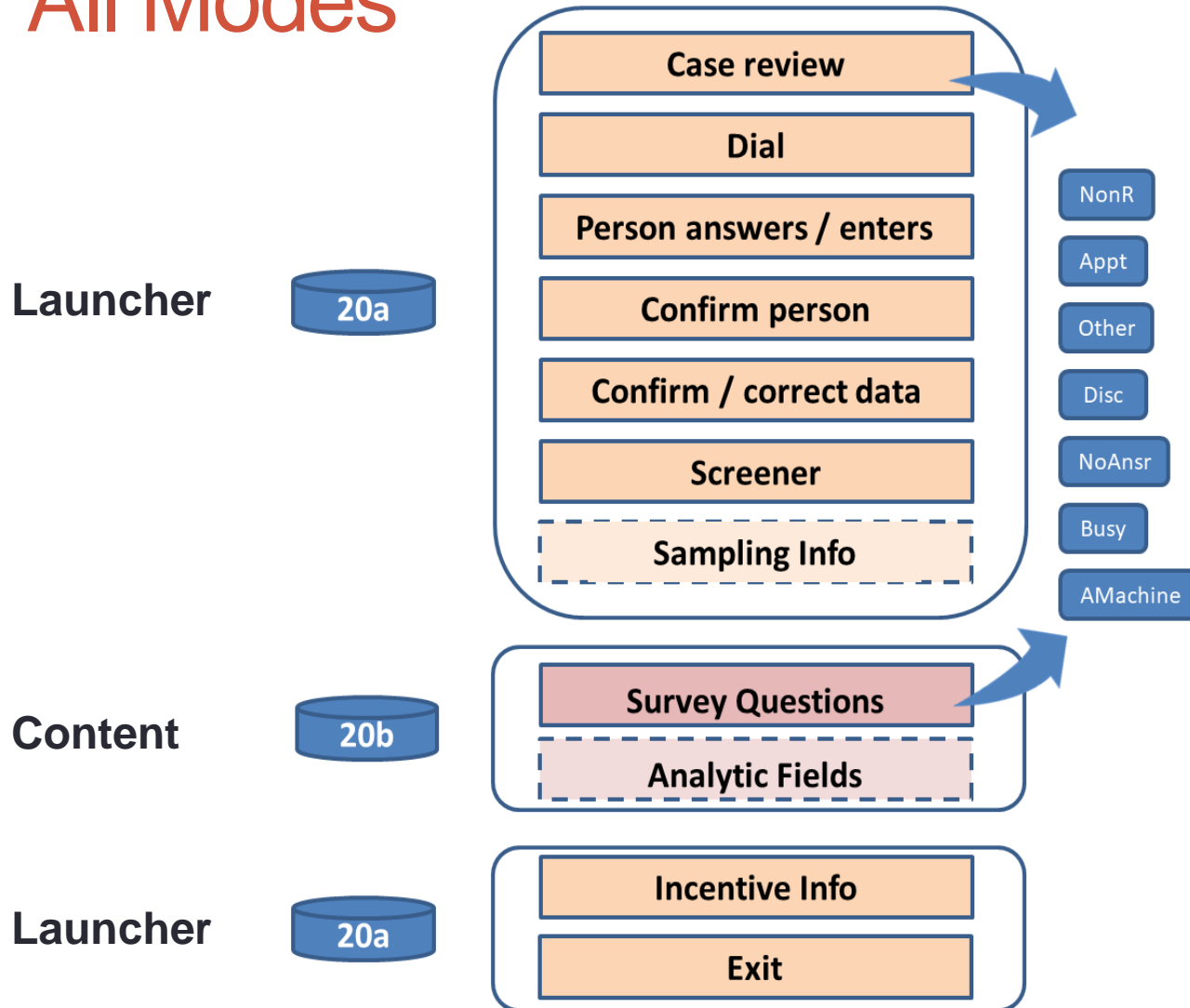


Or, use one Blaise database to do everything.

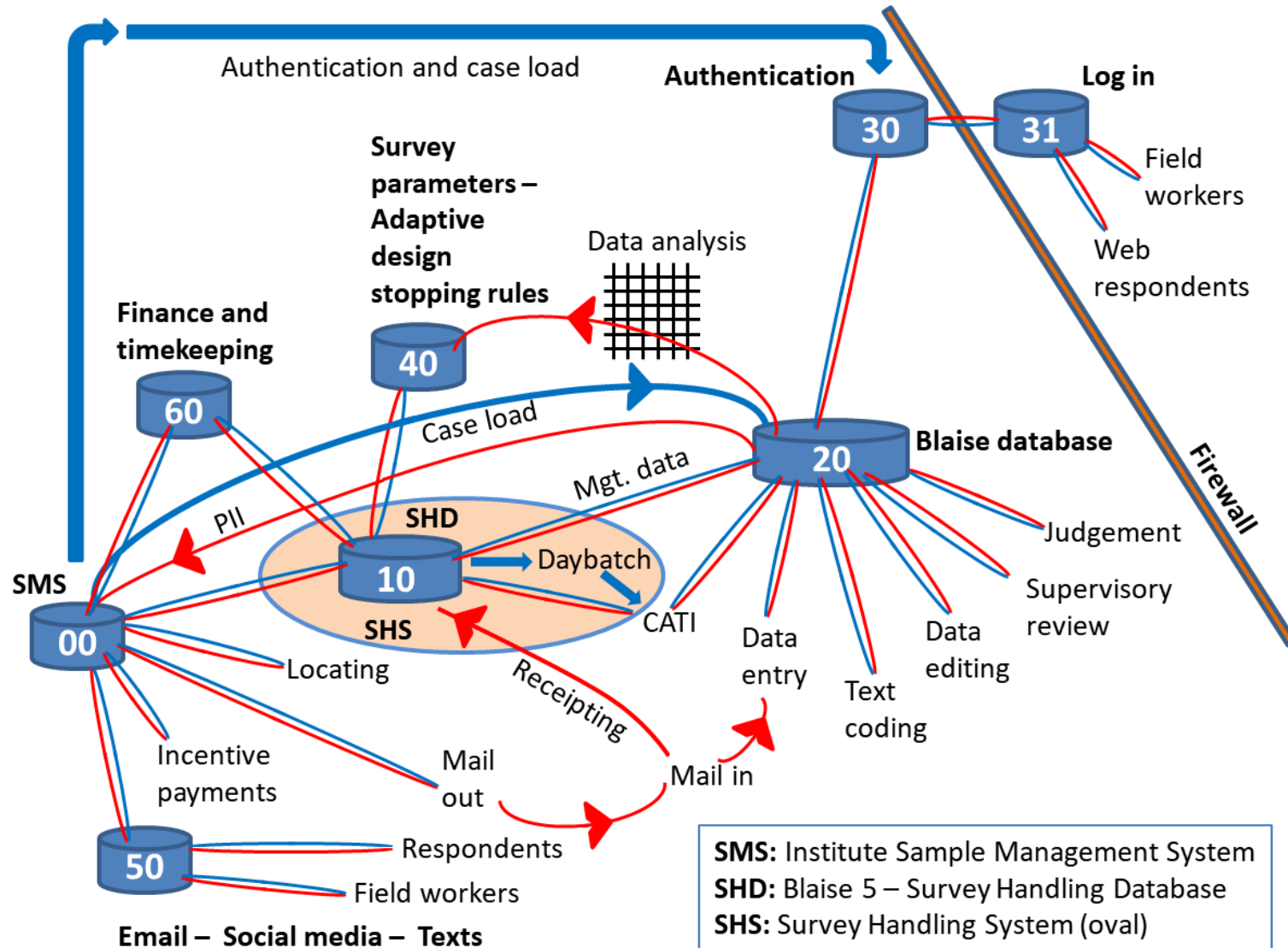


Launcher and Topic Datamodels

All Modes



Idealized Multimode Management System



4 Coding Schemes

- Happenings
 - What happened
- Operational status
 - Groups of similar cases
- Action codes
 - Instructions on what to do next
- Disposition codes
 - Calculate response rates
 - Derived dispositions

3 Helper Schemes

- Implications
- Progress
- Eligibility and related

Happenings

- CATI (mode)
 - No answer
 - Busy
- Web (mode)
 - R logs on
- Paper (mode)
 - Paper questionnaire received
- Email (channel)
 - Bounced email



Hey man,
what
happened?

Actions

- High level actions
 - Stop
 - Normal
 - Inbound only
 - Appointment
 - Rest case
- Actions
 - Send to locating
 - Send to supervisory review
 - Conduct CATI interview now
 - Resend paper questionnaire
 - Disable a phone number

Happenings – Meta / Action Codes

| Meta code | Description | Actions | | | |
|-----------|---|---------|--------|--------|--------|
| | | HLA | DLA 1 | DLA 2 | DLA 3 |
| 100 | WebComplete (14100) "Completed questionnaire" | 10 | 621000 | | |
| 110 | WebKeyDone (14110) "Key fields answered - complete" | 20 | | | |
| 120 | WebPartial (14120) "Partially completes" | 20 | | | |
| 130 | WebPartialWait (14130) "Partially complete - within waiting period" | 40 | 621310 | | |
| 140 | WebPartialFU (14140) "Partially complete - after waiting period" | 40 | 614100 | | |
| 200 | (13200) "Blank questionnaire - implicit refusal" | | | | |
| 210 | RSoft (13210) "Soft refusal" | | | | |
| 215 | WebBreakoff (14215) "Web breakoff while in survey" | 20 | | | |
| 220 | RHard (13220) "Hard refusal" | | | | |
| 230 | WebSubjStart (14230) "Started subject matter" | 20 | | | |
| 240 | WebScreenIn (14240) "R screens in" | 20 | | | |
| 245 | WebLogon (14245) "There is a web logon" | 20 | | | |
| 250 | Rse (13250) "R promises to complete" | 40 | 621310 | 614100 | |
| 251 | Web (13251) "R agrees to complete in web mode" | 20 | | | |
| 252 | WebRtoVisit (14252) "R agrees to complete if visited" | 40 | 621310 | | |
| 253 | WebRtoPaper (14253) "R agrees to complete paper questionnaire" | 50 | 621310 | 614100 | 616000 |
| 254 | WebRtoDevice (14254) "R agrees to complete via device" | 50 | 621310 | 614100 | |
| 255 | WebRtoPhone (14255) "R agrees to complete via phone" | 50 | 621310 | 614100 | |
| 300 | PtsWeb (13300) "A mailing prompts a web access" | 20 | | | |
| 310 | WebPromptsPhone (14310) "A web access - derived" | 30 | 621310 | | |
| 320 | WebPromptsPaper (14320) "A web access - derived" | 30 | 621310 | | |
| 400 | WebPolIntervenues (14400) "R's legislative representative calls in" | 30 | 621310 | | |

Stop

Keep going

Appointment

Rest Case

Inbound only

Happenings – Detail Action Codes

Appointment

**Stop outbound
CATI**

**Set CATI
Appointment**

| | | | | |
|-----|---|----|--------|--------|
| 130 | WebPartialWait (14130) "Partially complete - within waiting period" | 40 | 621310 | 614140 |
| 140 | WebPartialFU (14140) "Partially complete - after waiting period" | 20 | 614100 | |

**Resume
Normal**

**Resume
Normal CATI**


Operational Status


- Normal effort
- Hard refusal
- Soft refusal
- Definite appointment
- Ambiguous appointment
- Rest case
- Supervisory review

Dispositions

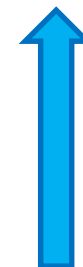
- Complete
- Partially complete
- Never available
- Voice mail
- Appointment
- Phone problem
- Actions
- Language issue
- Etc., etc., etc.

Derived Dispositions

- A succession of 'happenings'
 - No answer
 - Busy
 - Appointment  Soft Appointment?
 - No answer

 - No answer
 - No answer
 - No answer  Soft refusal?
 - No answer

Set by rule or algorithm or by
reference to a lookup table



Progress

- Touch
- Review end
- Dial end
- Hello end
- ID start
- Screener
- Content start
- Content partial
- Content end
- Incentive end
- Exit

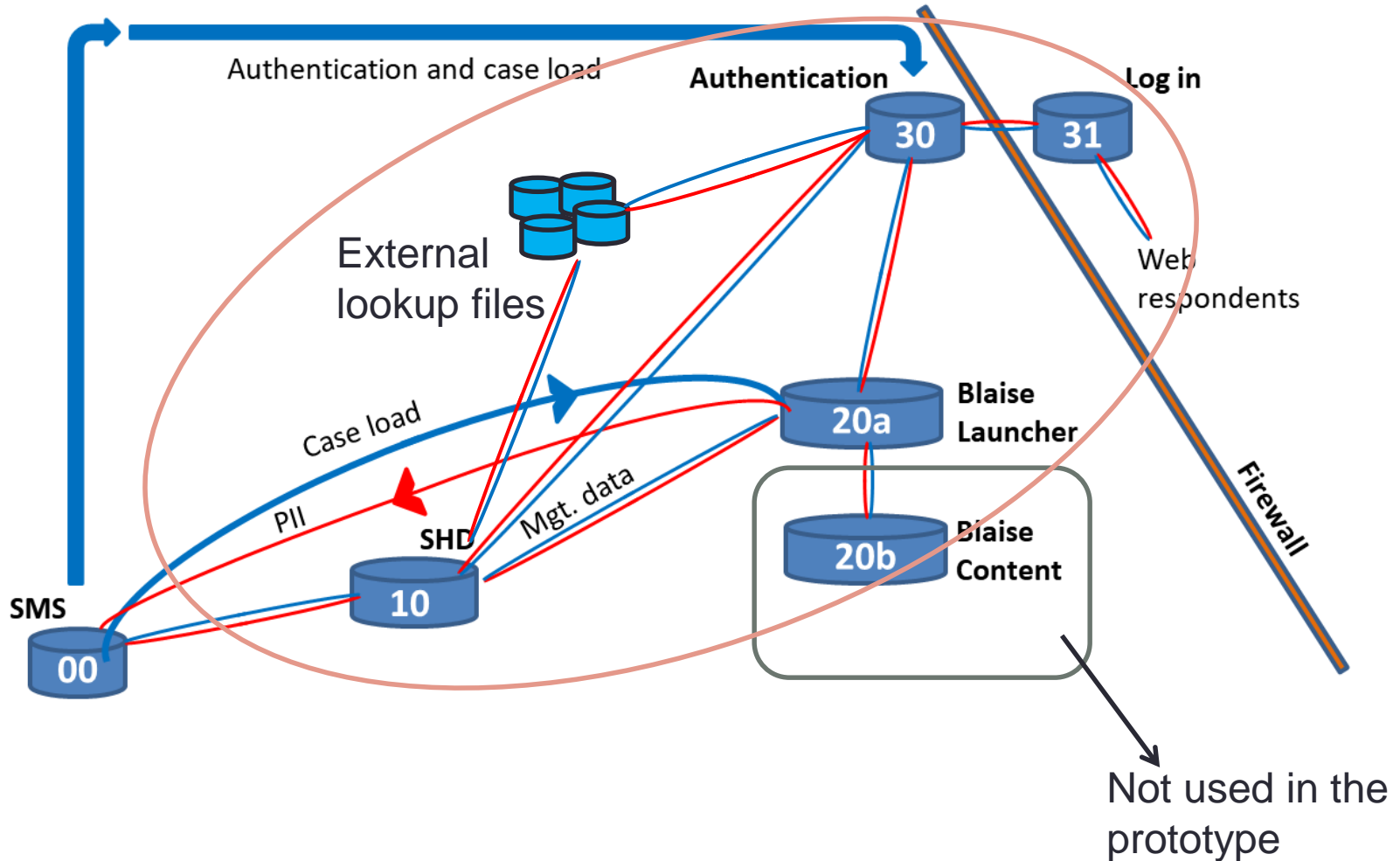
Implications

- No info
- Contact
- Identity
- Wrong person
- Stop
- Eligible
- Ineligible
- Follow-up
- Complete
- Other

Eligibility

- No information
- Contact
- Identity
- Eligible or ineligible

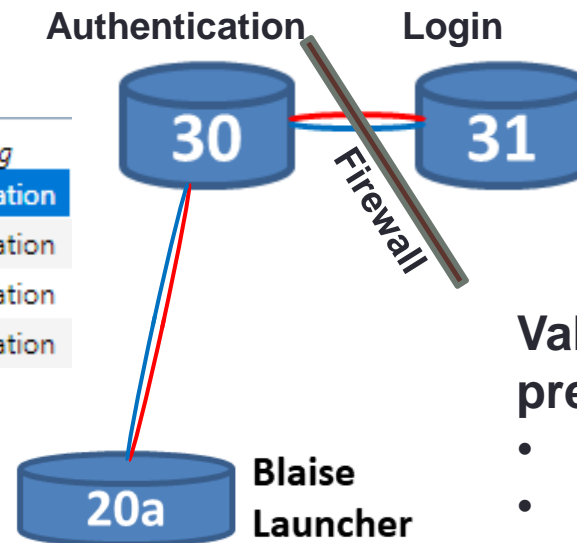
Web-Part Multimode Management System



This will be used for the prototype demonstration.

Authentication and Web Servers

| ID | UnitID | CaseID | Password | AuthHappening |
|----------|--------|--------|------------|------------------|
| 10001100 | 10001 | 1 | Pass100011 | NoAuthentication |
| 10002100 | 10002 | 1 | Pass100021 | NoAuthentication |
| 10002200 | 10002 | 2 | Pass100022 | NoAuthentication |
| 10003100 | 10003 | 1 | Pass100031 | NoAuthentication |

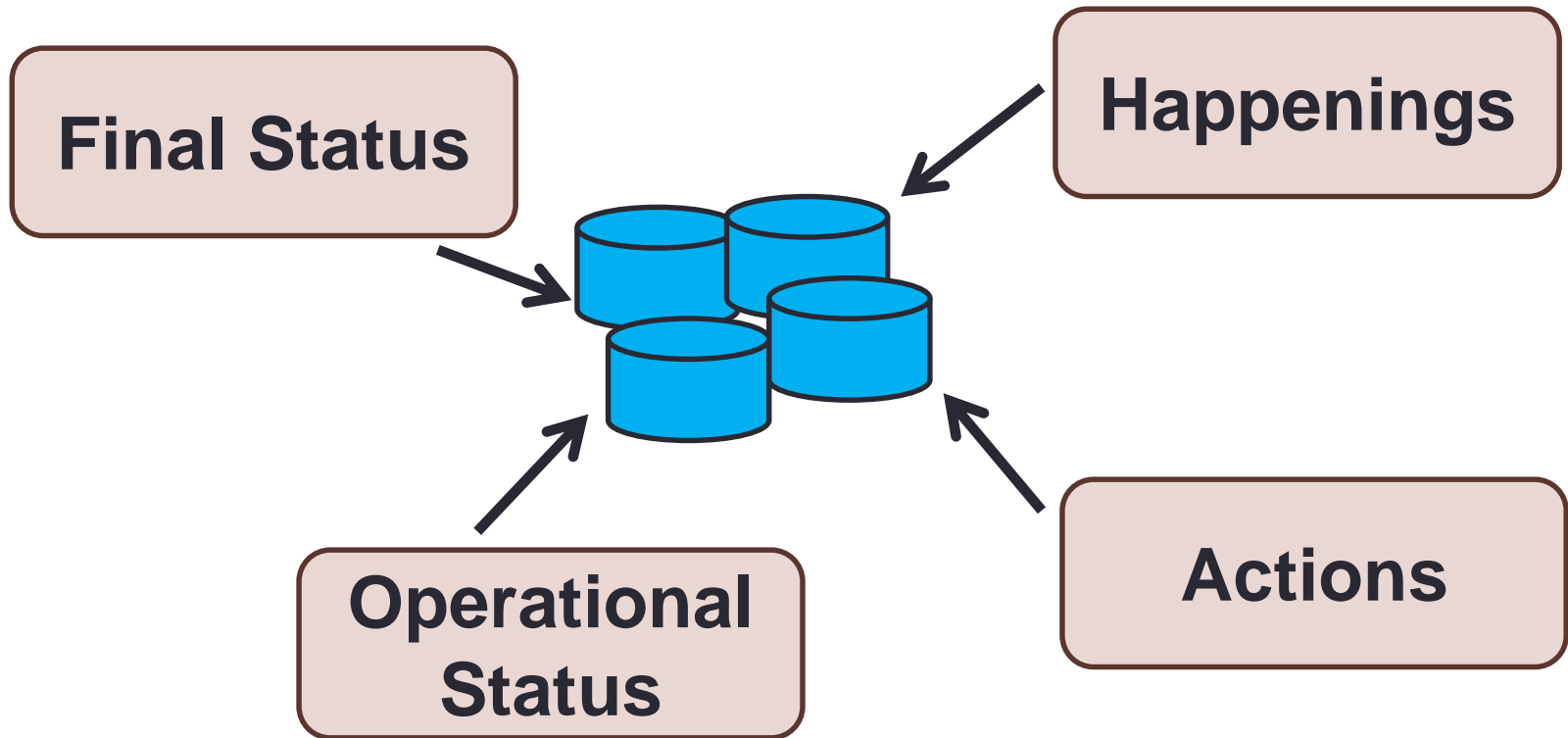


| UnitID | CaseID | ID |
|--------|--------|----------|
| 10001 | 1 | 10001100 |
| 10002 | 1 | 10002100 |
| 10002 | 2 | 10002200 |
| 10003 | 1 | 10003100 |

Validation and link preloads:

- Login ID
- Password
- Case ID number
- If there is a validation, then the corresponding Blaise record is opened

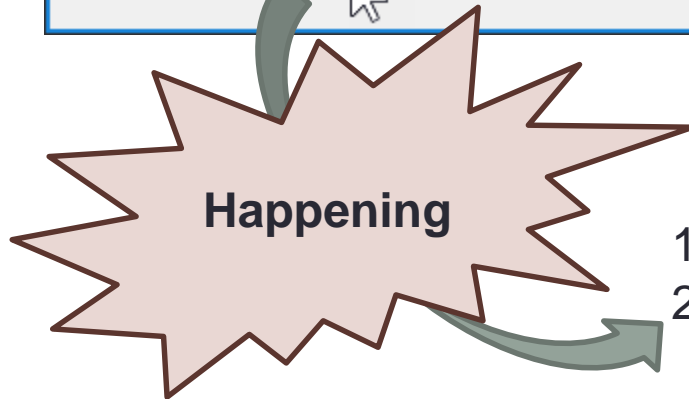
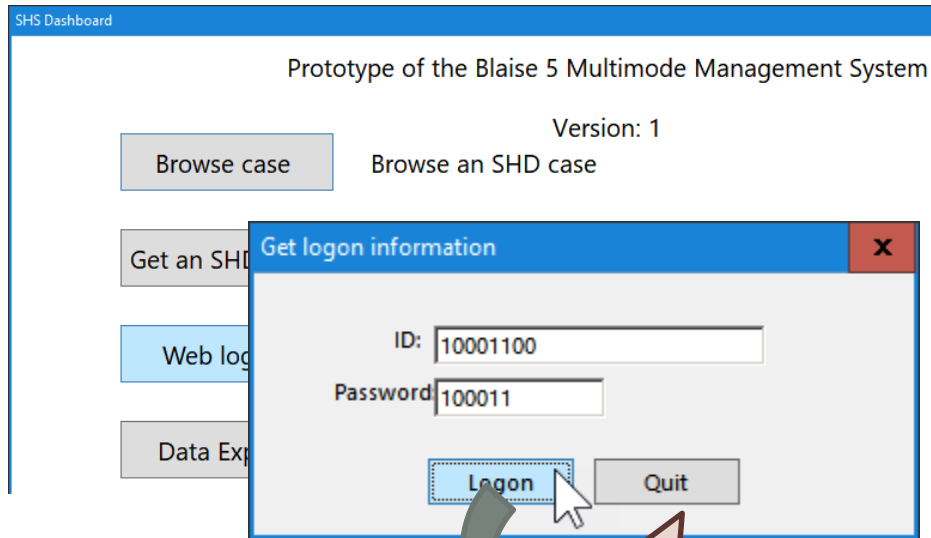
External Lookup Files



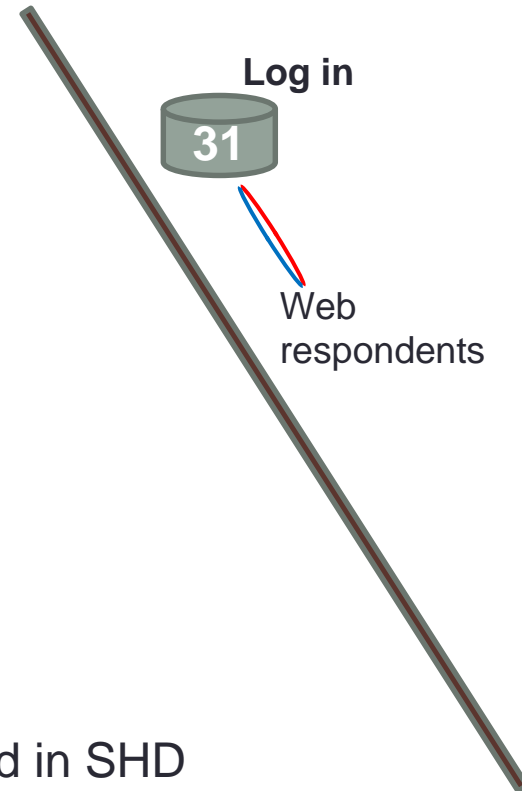
Purpose of the Prototype

- MMPSS has done some prototyping
- To demonstrate that the complexity of a multimode management system can be held in external files
 - As opposed to complex, hard-coded, source code procedures
 - Easily updated by survey staff, not programmers
 - Easier to test
 - Easier to understand
 - Can update without re-deploying the survey or part of it

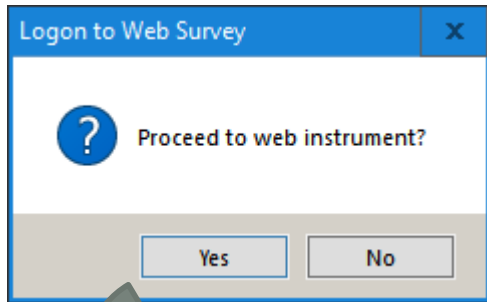
Logon Happening



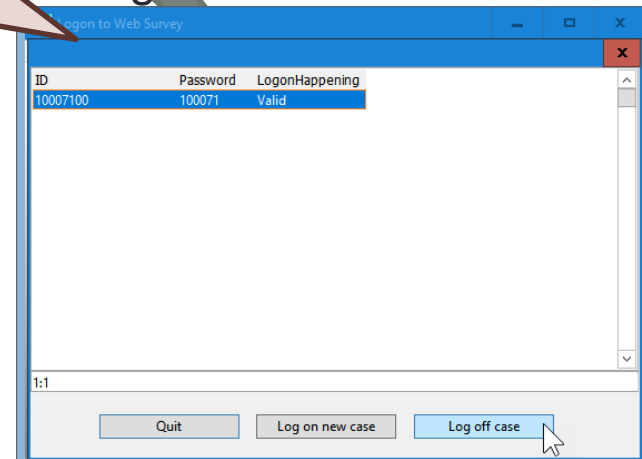
1. Record in SHD
2. Authenticate R



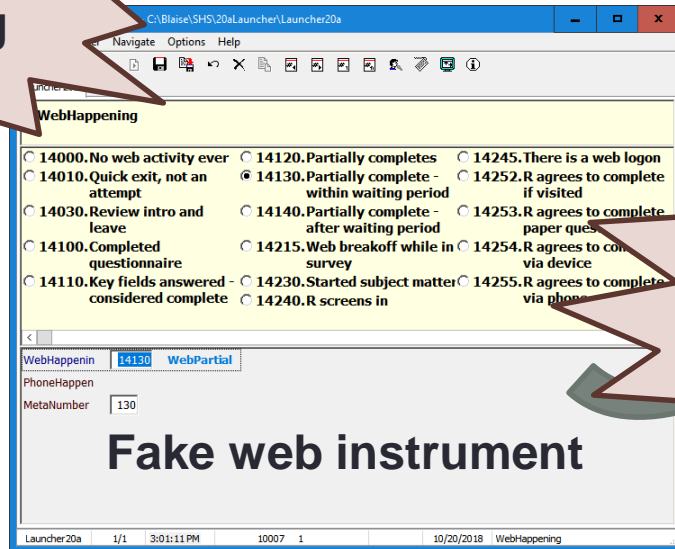
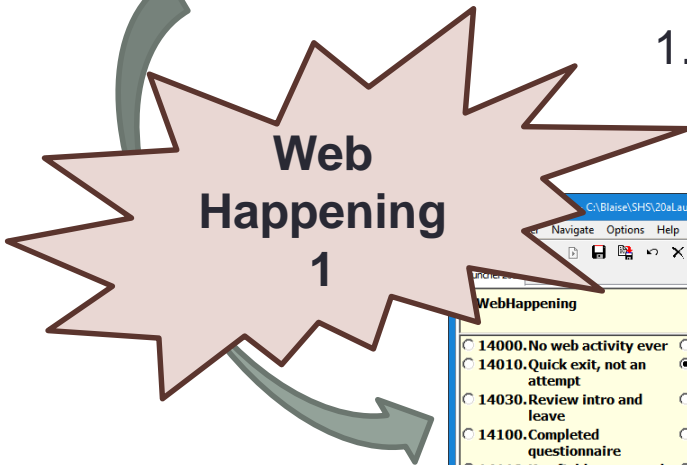
Happenings for login, web, and logout



Log out



1. Record in SHD



1. Record in SHD
2. Send to web



1. Record in SHD
2. Send to logout

SHD: Login and Web Record Updates

Logon happenings

| UnitID | CaseID | NumEvents | EventRec | LogonIndex | LogonDate | LogonTime | LogonBurden | LogonMetaNumber | LogonEvent | WebMetaNumber |
|--------|--------|-----------|----------|------------|------------|-----------|-------------|-----------------|-------------|---------------|
| 10001 | 1 | 2 | 1 | 1 | 10/20/2018 | 1:28PM | | | WebProgress | 130 |
| 10002 | 1 | 2 | 1 | 1 | 10/20/2018 | 1:31PM | | | WebProgress | 140 |

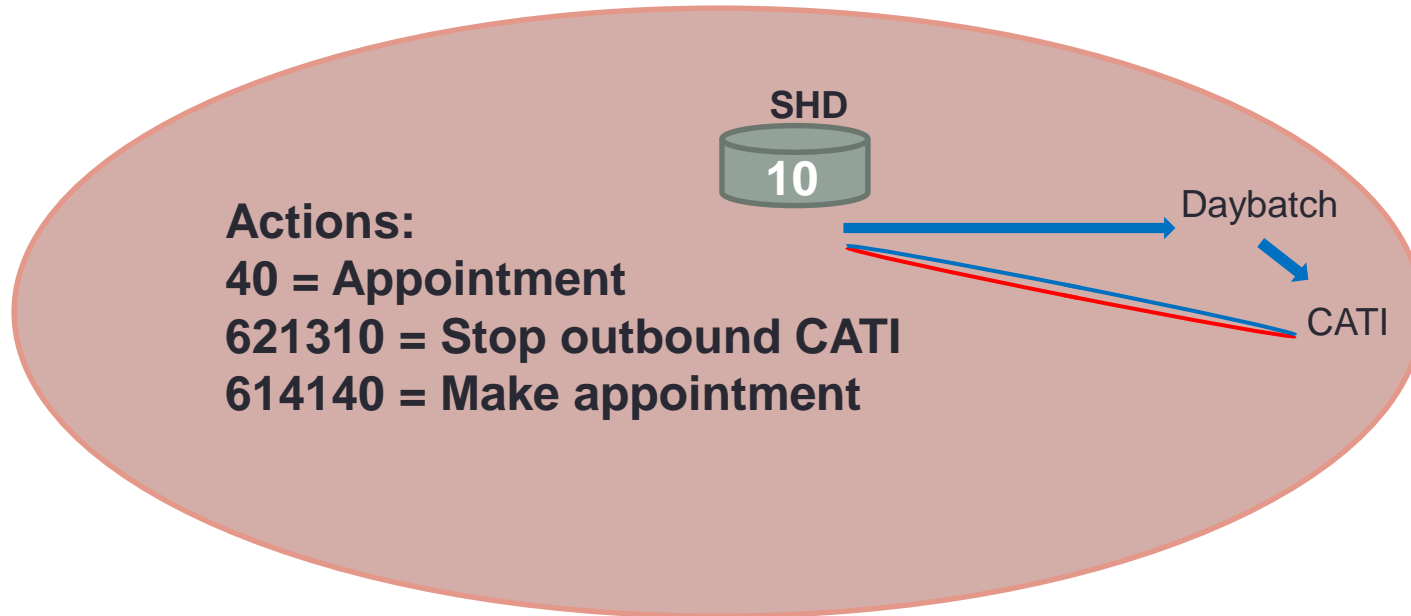
Web happenings

| UnitID | CaseID | WebMetaNum | ActionRec | DateRec | TimeRec | ActionRec | ActionCode | DateRec | TimeRec | ActionRec | ActionCode | DateRec | TimeRec | |
|--------|--------|------------|-----------|---------|------------|-----------|------------|---------|------------|-----------|------------|---------|------------|--------|
| 10001 | 1 | 130 | 1 | 40 | 10/20/2018 | 1:28PM | 2 | 621310 | 10/20/2018 | 1:28PM | 3 | 614140 | 10/20/2018 | 1:28PM |
| 10002 | 1 | 140 | 1 | 20 | 10/20/2018 | 1:31PM | 2 | 614100 | 10/20/2018 | 1:31PM | 3 | 20 | 10/20/2018 | 1:31PM |



Actions taken

SHS



What Blaise 5 Provides

- A framework
- 4 main coding scheme outlines
 - Happenings
 - Actions
 - Operational statuses
 - Final outcomes statuses
- Subsidiary schemes – to help with the main schemes
 - Progress
 - Implications
 - Eligibility
- Some (a few) procedures to tie it all together
 - You can change these

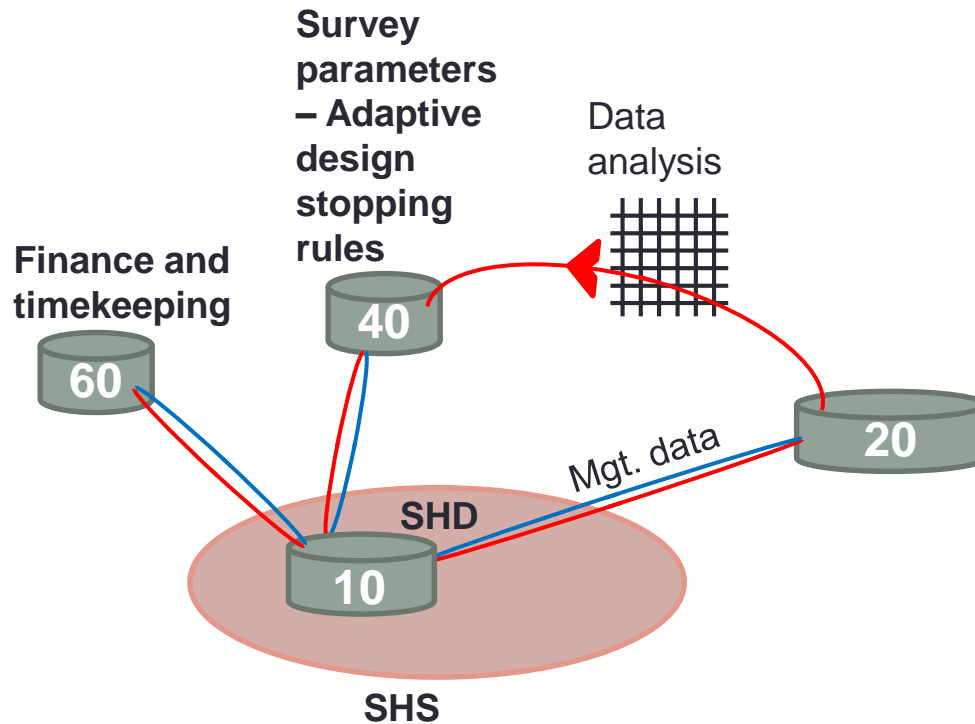
What the Blaise 5 User Provides

- For each of the coding frames
 - Codes ,Labels, Descriptions, et.
 - Actions, implications, eligibility, etc.
 - Mappings between schemes
 - Machines that produce the correct happenings codes
- It doesn't matter
 - How you number or label your machines
 - What code numbers you use
 - What labels you use
 - What descriptions you use

Responsive and Adaptive Survey Design

- A scientific set of practices that seeks to optimise the use of survey management resources
 - (Show books)
 - Systematically collects all appropriate survey management data
 - Constantly assesses the stability of key estimates
 - Continually is aware of accrued costs
 - Shifts resources and strategies if necessary

Responsive and Adaptive Survey Design



Responsive and Adaptive Survey Design

An Example

- Sampling strata
 - 6 Regions of a country (NE, SE, NC, SC, NW, SW)
- Domains
 - Gender (Male, Female)
 - 6 Age bands (18 – 30, 31 – 40, 41 – 50, 51 – 60, 61 – 70, 71 +)
- $6 \times 2 \times 6 = 72$ estimation groups
- 2 Important variables
 - Employed (Yes / No) – categorical variable (easy)
 - Income – continuous variable with large range and skew (hard)
- $72 \times 2 = 144$ estimates to track during the survey
 - While collecting data, not after

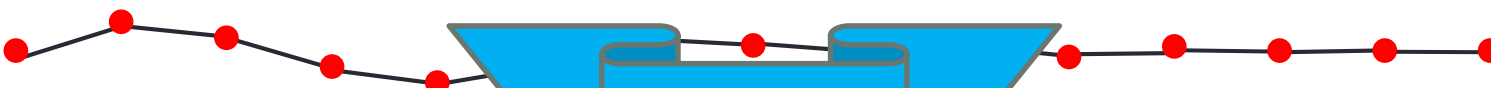
RASD Basics – an Example

Survey length



Women, 31 – 40, NE

Employed



Income



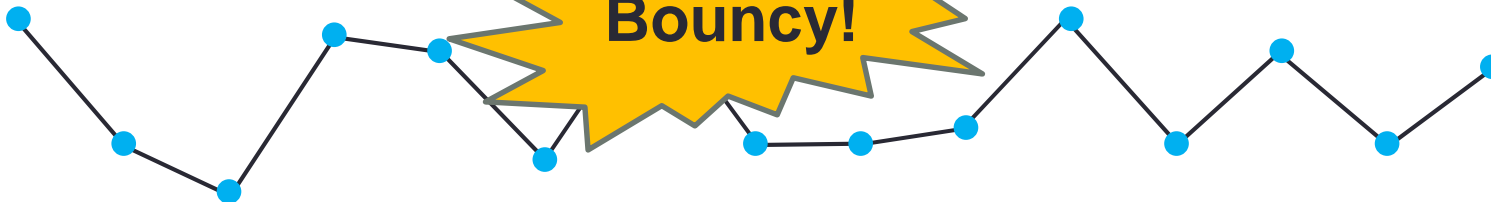
Calm!

Men, 41 – 50, SW

Employed



Income



Bouncy!

RASD Basics – an Example

Survey length



Women, 31 – 40, NE

Employed



Income

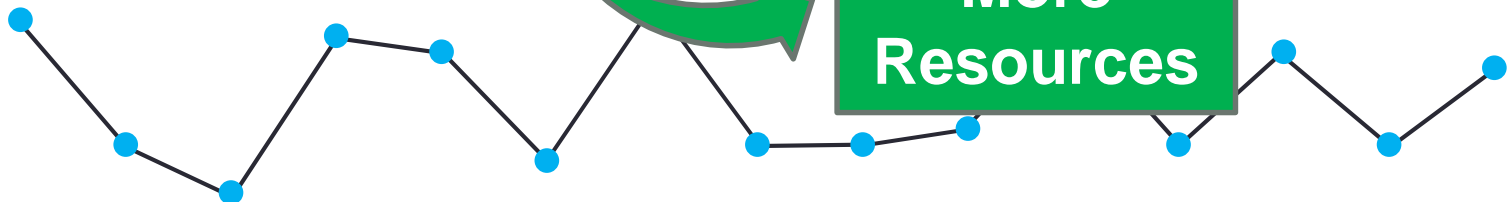


Men, 41 – 50, SW

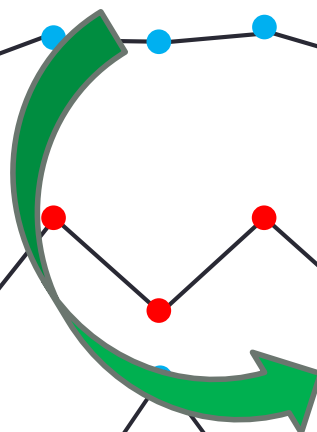
Employed



Income



More Resources



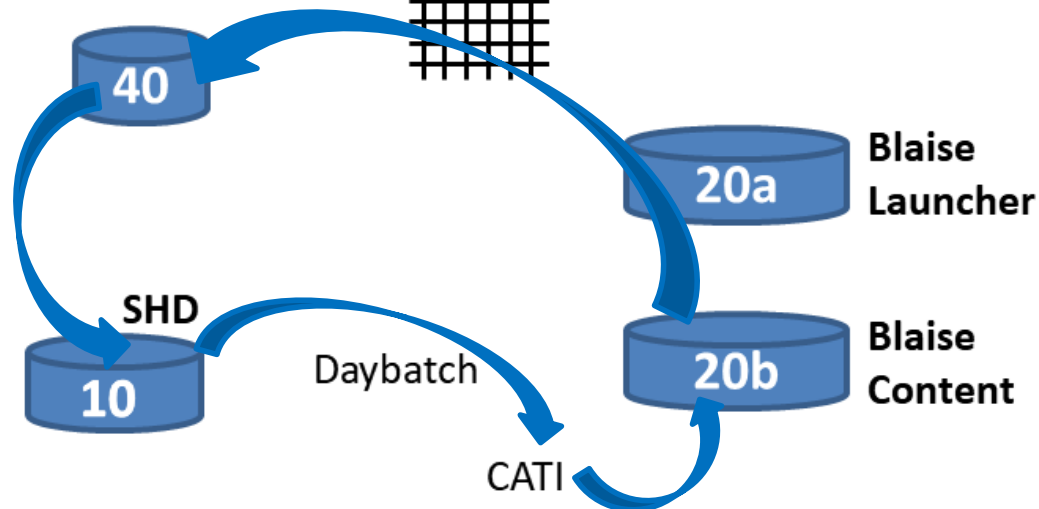
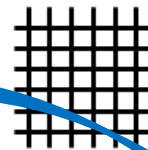
Responsive and Adaptive Design

Survey length

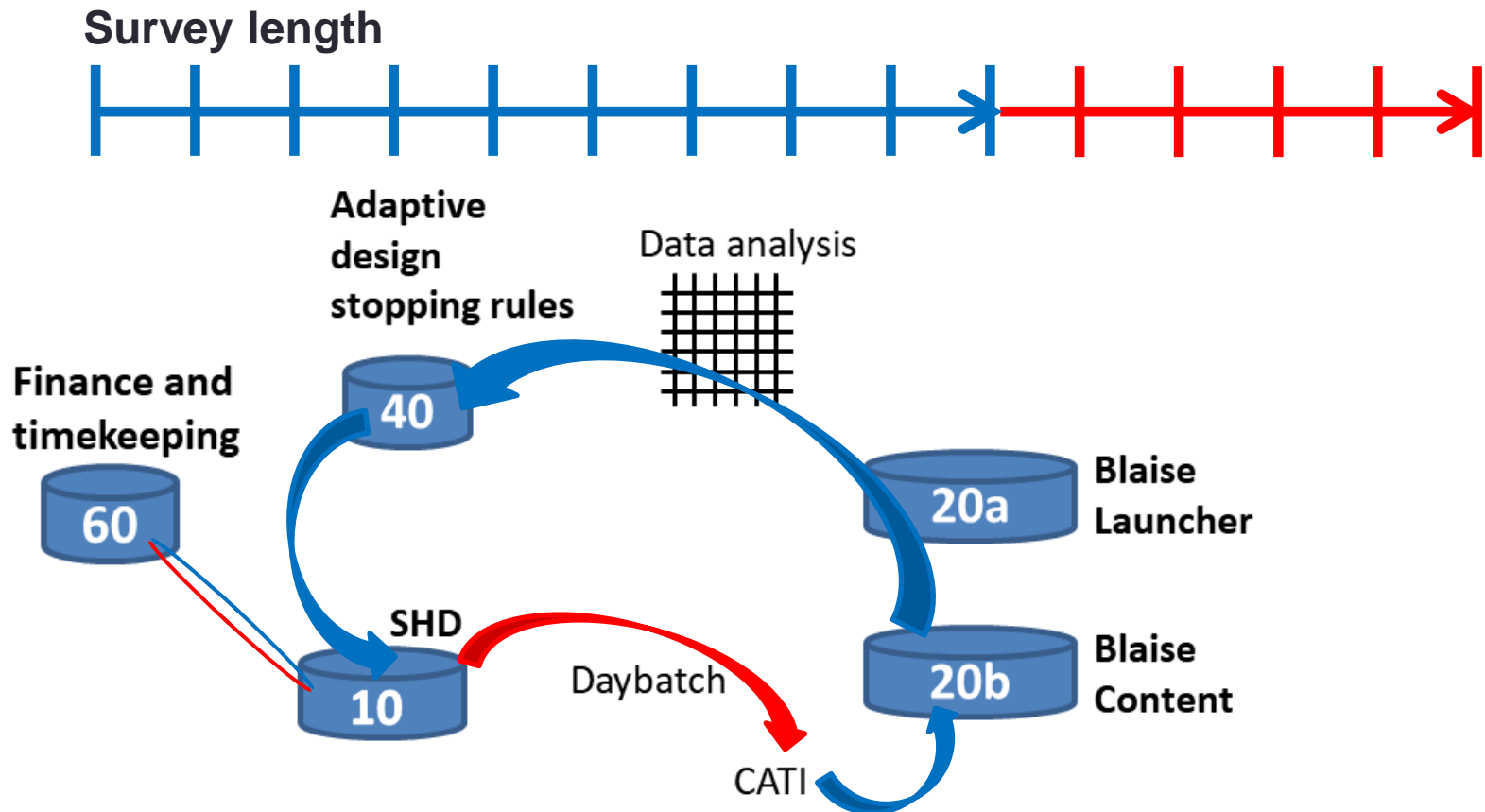


Adaptive design
stopping rules

Data analysis



Responsive and Adaptive Design



Blaise 5 Multimode Management

- The end