



# Web-based CAI System for Blaise Instruments Development

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## Outline

- Background
- Hatteras™ Web-based CAI System for CAWI, CATI, and CAPI instruments
- Conclusion



## Background

- Questionnaire Specifications Database (QSD)
  - Used for development of bilingual and ACASI Blaise instruments since 2004 (presented at IBUC in 2007)
- Web-based CAI System Hatteras™
  - Used for all web instruments since 2006
    - [SurveyEditor](#) provides interface for entering and editing instruments
    - [SurveyEngine](#) creates pages on-the-fly to conduct web interview
    - [Commander](#) assists with specs loading, code testing, debugging and other needed utilities

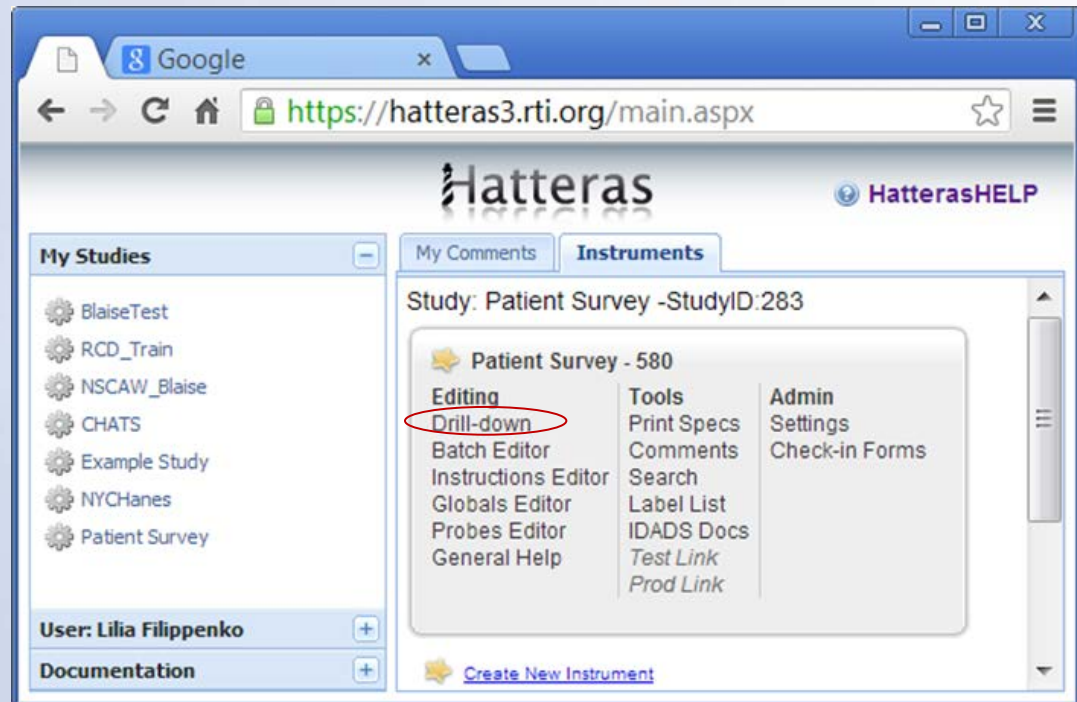
# Hatteras™ SurveyEditor

- Meta-data in SQL Server
- Access to the website
  - Study Admin
  - Programmer
  - Language Specialist
  - Spec Writer
  - Client



# Hatteras™ SurveyEditor - Dashboard

- My Studies
- Tools
  - Drill-down Editor
  - Print specs
  - Comments
  - Check-in forms
  - Search
  - Help



# Hatteras™ Drill-down Editor Overview

The screenshot displays the Hatteras Drill-down Editor interface. The browser address bar shows the URL: <https://hatteras3.rti.org/modules/drilldown.aspx?iid=580>. The interface is divided into three main sections:

- Instrument Elements:** A left-hand pane titled "Forms" containing a tree view of instrument elements. The selected element is "INTINTRO".
- Available options for a selected element:** A central pane showing the selected element's content. It includes a "Checkout" button, a "Q1 Wording" button, and a "PreLogic" button. Below these are tabs for "English", "Spanish", "Chinese", "Korean", and "Vietnamese". The main content area displays the text: "The first few questions are for statistical purposes only, to help us analyze the results of the study." Below this is a "CODE:" field with a red background and a "Toggle HTML" link.
- Element Properties:** A right-hand pane titled "Form Properties" containing a table of properties for the selected element.

Property	Value
Form Name	INTINTRO
Display Label	
Mode Probe	Select One
Custom	<input type="checkbox"/>
Active	<input checked="" type="checkbox"/>
RF v3.2	<input type="checkbox"/>

Instrument  
Elements

Available options for a selected element

Element  
Properties

# Hatteras™ Instrument Elements in Editor

- Instrument Elements

- Section

- Form

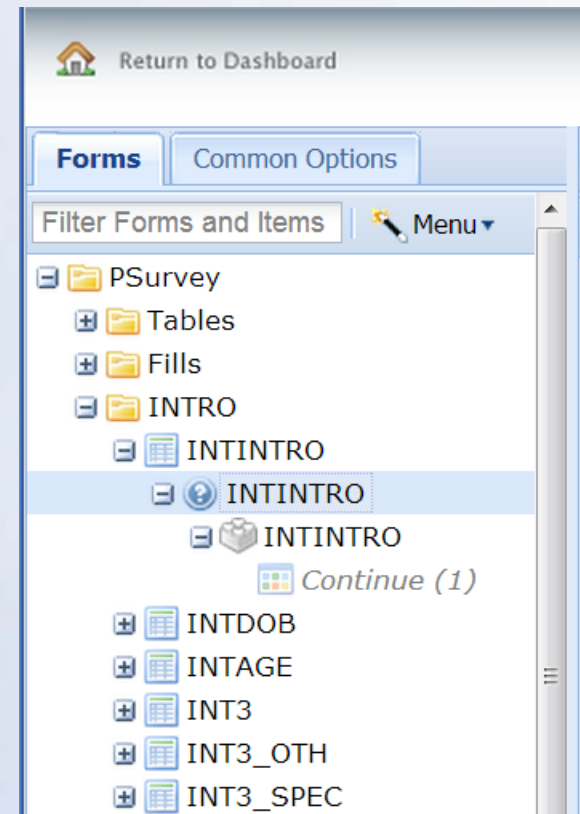
- Question

- Item

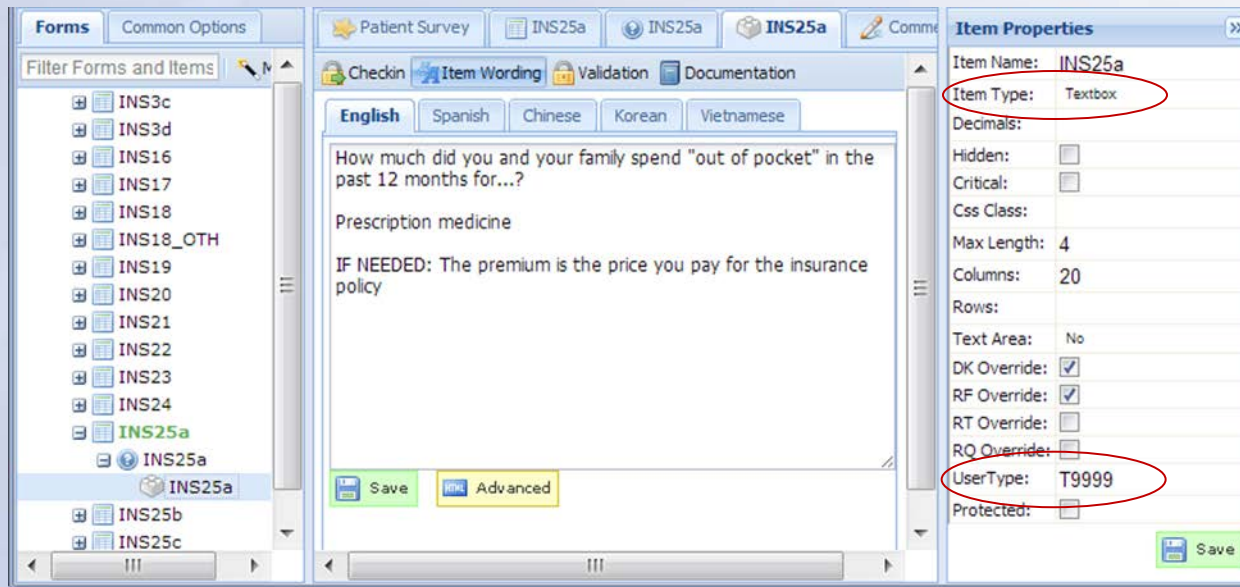
- Item Option

- Usage in Blaise Instrument

- Field Name = Item Name
  - Question Text = Question Text + Item Text



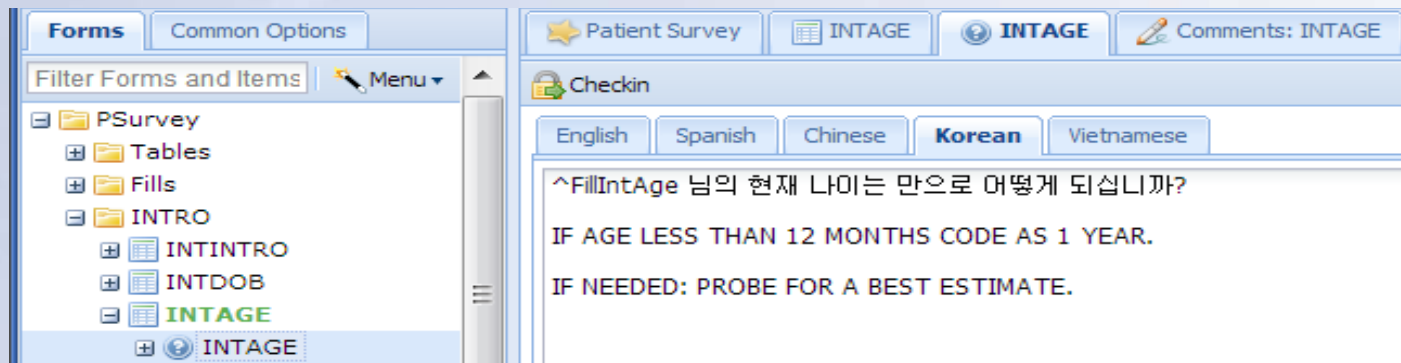
# Hatteras™ Blaise Specific Options



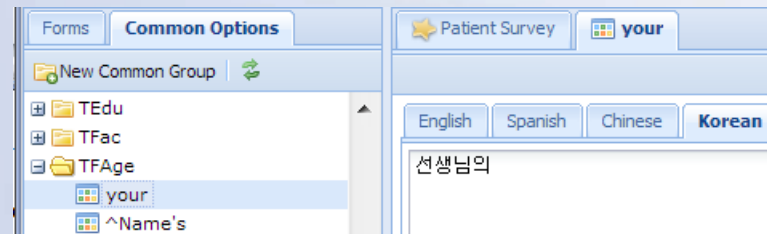
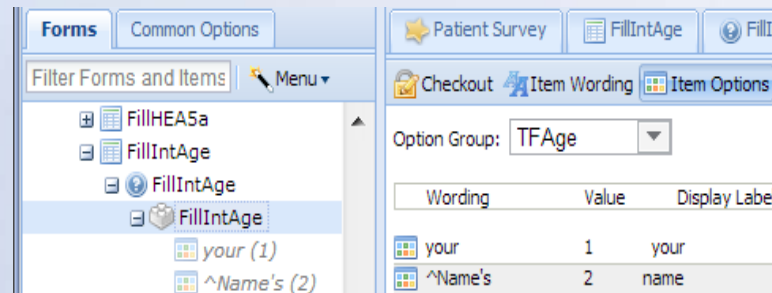
- Blaise user-defined types - "UserType" property
- Don't Know/Refusal/Empty - "DK/RF/RQ Override" properties
- "Set of" type in Blaise - question as "check box" and its item as "radio"
- Field attributes "Description" and "Tag" - "Documentation" tab



# Managing Languages in Hatteras™

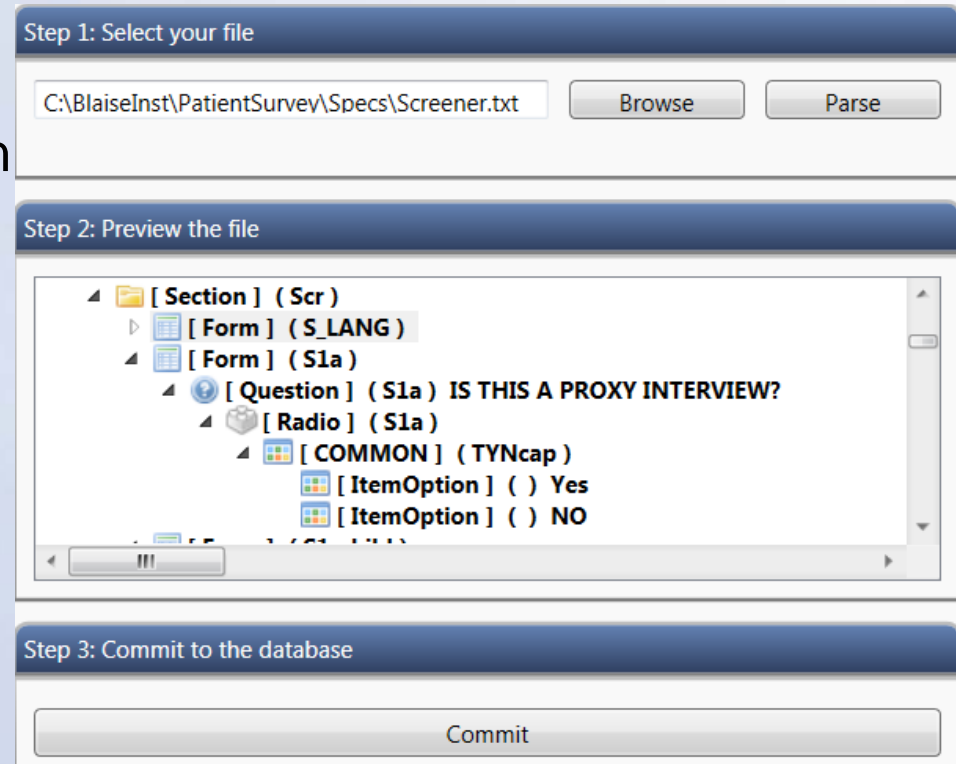
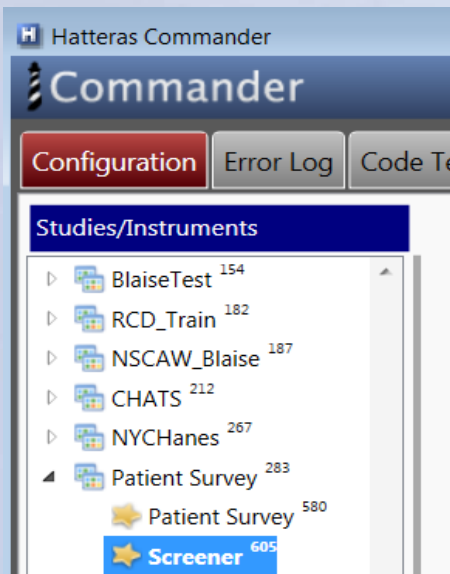


- Translated text can be imported into Hatteras™ Database
- Edits can be made via Hatteras™ Editor
- Text for fills is entered as item options

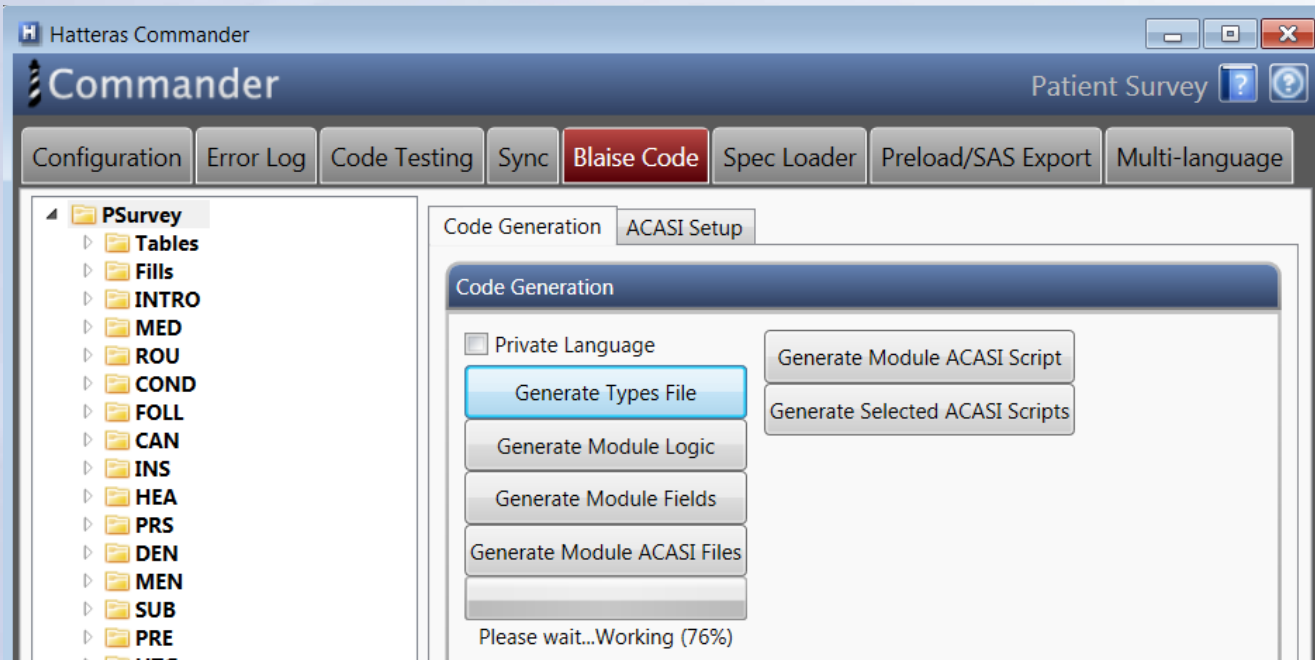


# Hatteras™ Commander Overview

- Client Utility (Blaise)
  - Instrument configuration
  - Blaise Code
  - Multi-language
  - Specs Loader



# Generate Blaise Code in Hatteras™ Commander



- Types file and Module Fields file – updated every time change is made in Hatteras™ Editor
- Programmers work in the Logic files only
- Files are created as UTF-8 Unicode to use with Non-Western languages (Chinese, Vietnamese, Korean, etc.)

# ACASI in Hatteras™ Commander

Hatteras Commander

Commander NSCAW\_Child

Configuration Error Log Code Testing Sync **Blaise Code** Spec Loader Preload/SAS Export Multi-language

Code Generation ACASI Setup Item ACASI

Item ACASI properties

Sound Identify: W\_Y\_AC0

Language: English

FileID	FileName	FileType	Order	Script
4257	Y_AC0_10_ENG.wav	Question	10	Now I'd like you to use the headphones to listen to some questions MOVE COMPUTER SO RESPONDENT CAN USE IT AND POINT OUT T - NUMBER KEYS - ENTER KEY (TO ACCEPT AND STORE THE RESPONSE) - FUNCTION KEYS CAUTION RESPONDENT ABOUT ON/OFF SWITCH. ADJUST HEADPHONES FOR RESPONDENT AND DEMONSTRATE VO WHEN RESPONDENT IS READY, PRESS "1" AND [ENTER] TO CONTIN
4258	TContinue_ENG.wav	QuestionText	200	Continue, Press 1

Edit File

File Name: Y\_AC0\_10\_ENG.wav File Type: Question File Order: 10

Script:

Now I'd like you to use the headphones to listen to some questions and enter your answers into the computer yourself. This will allow you to answer the questions in complete privacy. I will not be able to hear the questions or see the answers you type into the computer. I'll help you do the first few, and I'd like you to finish the rest on your own. Let me explain how to use the computer.  
MOVE COMPUTER SO RESPONDENT CAN USE IT AND POINT OUT THE FOLLOWING:  
- NUMBER KEYS  
- ENTER KEY (TO ACCEPT AND STORE THE RESPONSE)

# Hatteras™ Comments and History

Comments - a way to communicate needed changes and testing results

Select Comments Status

All
  New
  Under Discussion
  Action Determined
  Programmer Action Needed
  Non-programmer Action Needed

Programmer In Progress
  Programmed Not Deployed
  No action needed
  Changes completed
  Testing failed
  Verified

Show All Sections ▾ New Comment Print Comment Details

Section	Form	Priority	Comment	Assigned To	By	Created on	Status	Last update	Qx Ord ▲
B1Loop	<a href="#">B1b</a>	Normal	<a href="#">This screen will not let you enter 1 week or 1 month, having problems entering anything here for number and week/month. Had to enter DK to both to move forward</a>		jperkins	7/7/2011 3:21:57 PM	Verified	11/14/2011 11:49:41 AM	
B2Loop	<a href="#">B2_desc</a>	Normal	<a href="#">The word "area" is missing e.g., "...living area vacuumed."</a>		lflicker	8/1/2011 10:04:42 AM	Verified	11/14/2011 11:49:59 AM	
CA13up	<a href="#">CA13upTr4</a>	Normal	<a href="#">I corrected a typo</a>		lflicker	8/1/2011 5:38:47 PM	Verified	11/17/2011 2:45:33 PM	

History - provides a detailed record of all changes made to the form

Forms Common Options

Patient Survey
MEDINTRO
Comments: MEDINTRO

Checkout
Q1 Wording
PreLogic
PostLogic
Validation
Grid Columns
Form Info
Documentation
Helptext
History

Filter Forms and Items Mer ▲

- PSurvey
  - Tables
  - Fills
  - INTRO
  - MED
    - MEDINTRO
      - MEDINTRO
      - MED1
      - MED2

Show History

	Source	Form	Question	Item	Details	Modified By	Modified On
⌚	Question Wording	MEDINTRO	MEDINTRO		Las siguientes preguntas se refieren a la disponibilidad de varios tipos de servicios médicos. Al responder las siguientes preguntas no incluya el cuidado dental, los medicamentos recetados, la consejería o el tratamiento de la salud mental.	GMcavinchey	8/20/2013
⌚	Question Wording	MEDINTRO	MEDINTRO		下一組問題將會問各種醫療服務的提供情況。在回答接下來的幾個問題時，請勿將牙科護理、處方藥、諮詢或心理健康治療包括在內。	myuan	8/15/2013
⌚	Question Wording	MEDINTRO	MEDINTRO		Bộ câu hỏi kế tiếp sẽ hỏi về khả năng nhận được các loại dịch vụ y tế khác nhau. Khi trả lời một số ít câu hỏi kế tiếp, xin không nói về việc chăm sóc răng, thuốc kê toa, cố vấn hoặc điều trị bệnh tâm thần.	nguyen	8/5/2013

# Conclusion

## Features of Hatteras™

- Multiple Language Support
  - Translation specialists can enter and edit instruments in Spanish, Chinese, Vietnamese, Korean, and more...
- Output of Programming Code
  - Generate simple code and update question text in different languages
- Enhanced Workflow Process
  - Documented communication of specifications between programmers, designers, and clients
  - History of all changes
- Import and Output Specifications in Multiple Formats



Thank you!

Questions?

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