

Running SAS on an iPhone?

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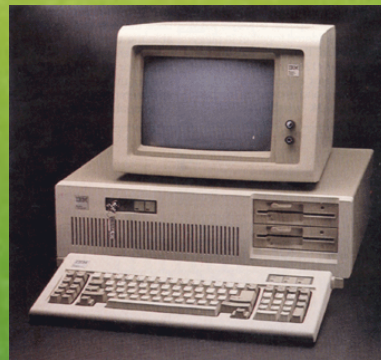
Presentation Overview

- iPhone and Mobile Computing Revolution
- System Architecture
- iPhone Software Delivery
- Server Side Computing and Communication
- User Access and Security
- Running Macros and Selecting Parameters
- Viewing SAS Data



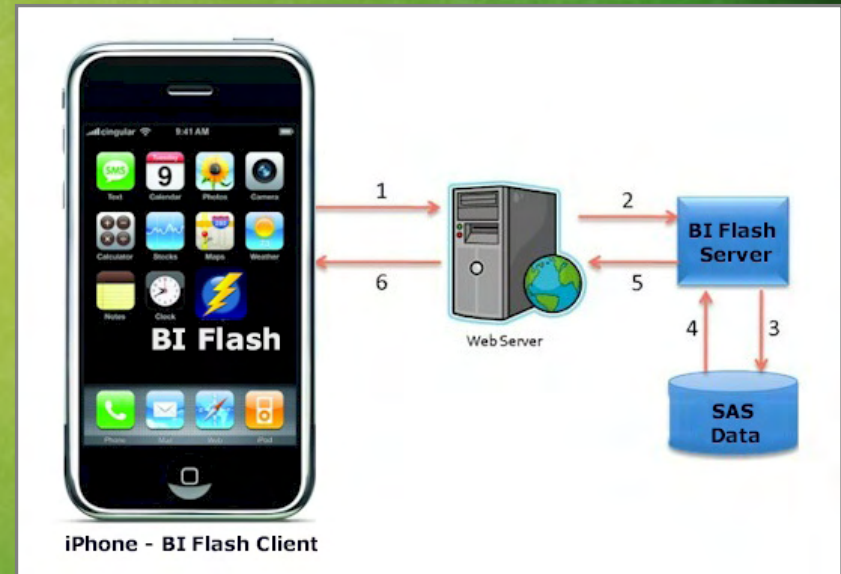
iPhone and Mobile Computing Revolution

- Tipping Point: AppStore, 2 billion iPhone downloads with 50K apps
- Analagous to PC Revolution vs Main Frames



System Architecture

- TCP/IP Similarities Web Client
- Three Components
 - iPhone Client
 - Web Server
 - SAS Application server
- SAS Data and Macro Logic on Server
- Data View and Parameter Selection on iPhone



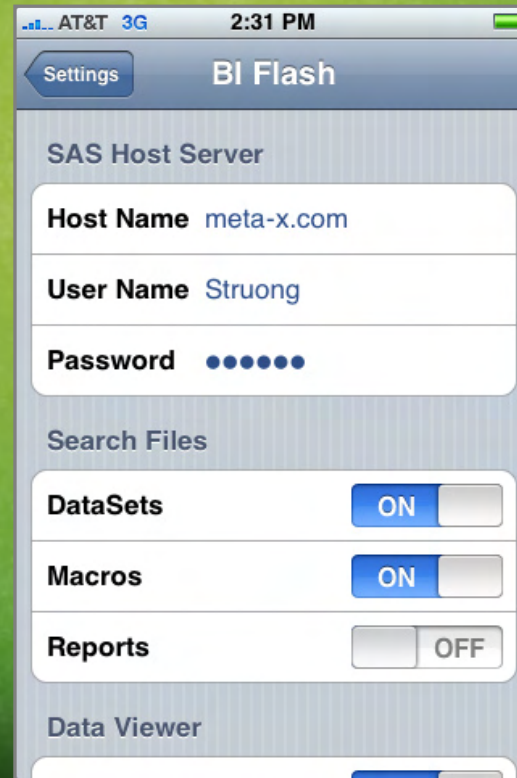
iPhone Software Delivery

- iPhone App Store
- Search, Download, Run...
- No more Shrink Wrap Box



Server Side Computing and Communication

- iPhone Settings Like Control Panel
- SAS Host Server
 - Host Name
 - User Name
 - Password



Running Macros and Selecting Parameters

- Sample Macro Named Parameters

```
*** Generate Report of data by specific subset ***;  
%dataview (indata = mylib.demog,  
          sortby = subjid startdt,  
          reptitle = Demographic data sorted by  
subject ID and start date);
```

- Three Macro Steps

1. Selecting Macro
2. Selecting Parameters
3. Running Macro

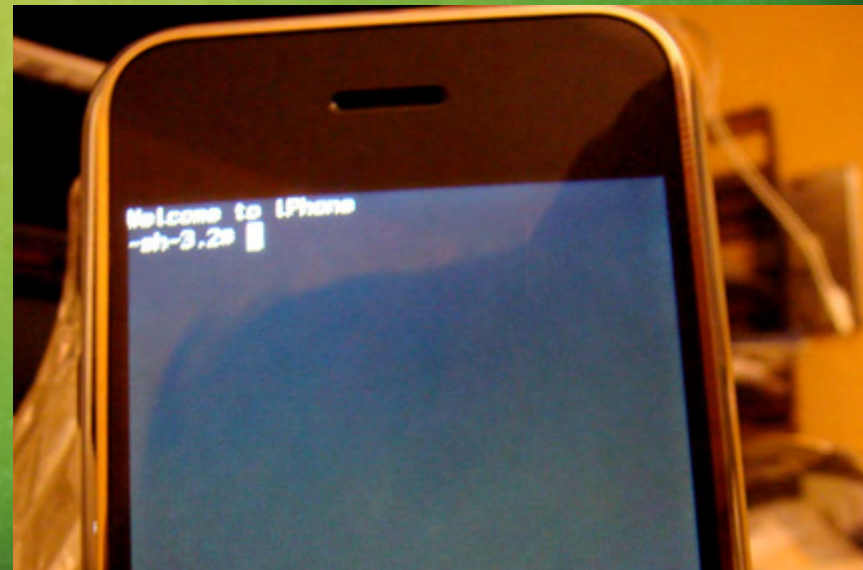
Sample Macro With Error

- %DIFFTEST Macro With Wrong Parameters

- %macro difftest (
 title=,
 path=,
 data1=, data2=, data3=);

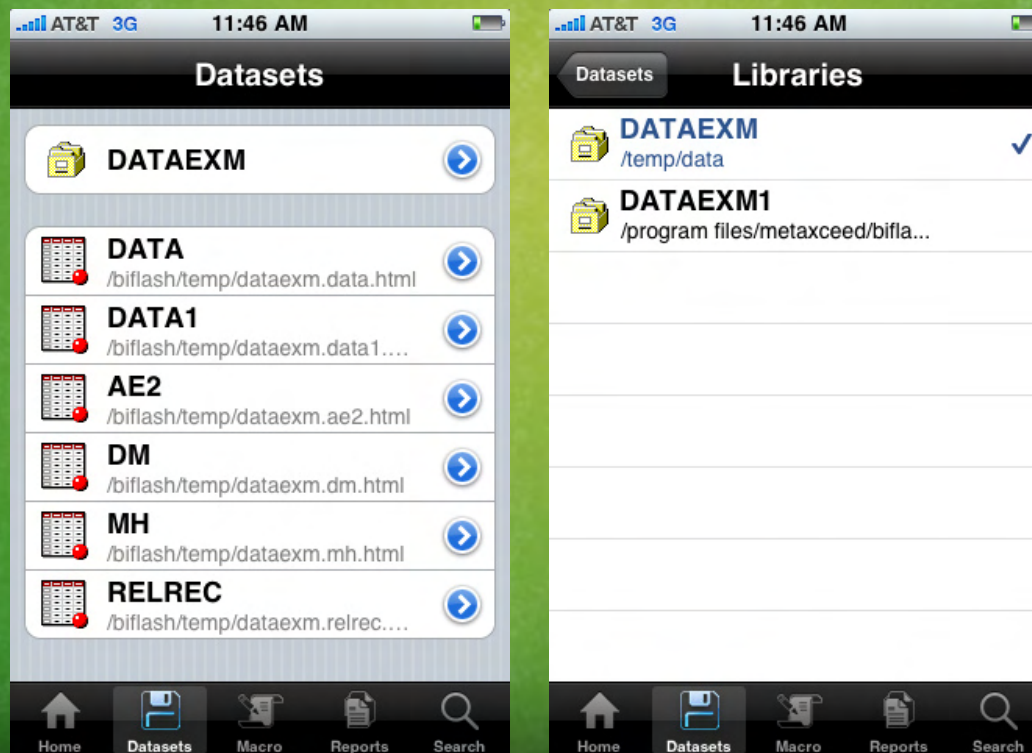
- Two Parameters

1. Display ERROR
2. Review Log



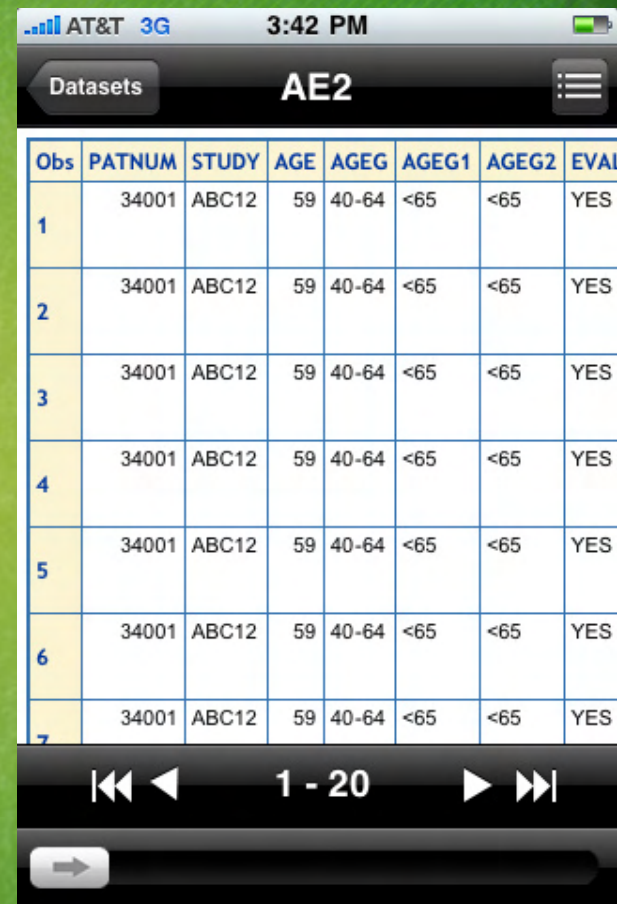
Step 1 - Selecting Data

- Select SAS Dataset from SAS Libraries
- Standard iPhone Selection List



Step 2 – View Data

- View Data Optimized for iPhone Screen
 - ODS Optimized Fonts
 - Vertical or Landscape View
 - Dynamic Update to Date View Noted Footnote



AT&T 3G 3:42 PM

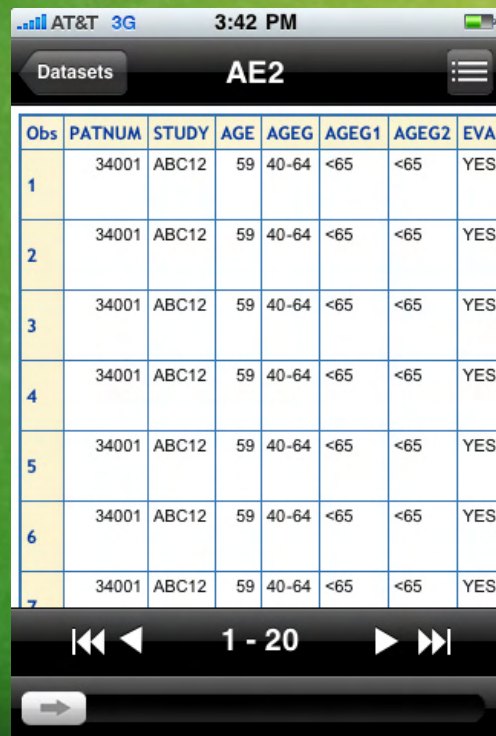
Datasets AE2

Obs	PATNUM	STUDY	AGE	AGE1	AGE2	AGE3	EVAL
1	34001	ABC12	59	40-64	<65	<65	YES
2	34001	ABC12	59	40-64	<65	<65	YES
3	34001	ABC12	59	40-64	<65	<65	YES
4	34001	ABC12	59	40-64	<65	<65	YES
5	34001	ABC12	59	40-64	<65	<65	YES
6	34001	ABC12	59	40-64	<65	<65	YES
7	34001	ABC12	59	40-64	<65	<65	YES

Navigation controls: 1 - 20

Step 3 – Navigate Data Chunks

- Chunk to Smaller Views
- Slider or List Selection for Check Selection



The screenshot shows an iPhone screen with a status bar at the top displaying 'AT&T 3G' and '3:42 PM'. The app's header bar is black with 'Datasets' on the left, 'AE2' in the center, and a menu icon on the right. Below the header is a table with columns: Obs, PATNUM, STUDY, AGE, AGE1, AGE2, and EVAL. The table contains 7 rows of data. At the bottom, there is a navigation bar with left and right arrow buttons, a central display showing '1 - 20', and a slider control below it.

Obs	PATNUM	STUDY	AGE	AGE1	AGE2	EVAL
1	34001	ABC12	59	40-64	<65	YES
2	34001	ABC12	59	40-64	<65	YES
3	34001	ABC12	59	40-64	<65	YES
4	34001	ABC12	59	40-64	<65	YES
5	34001	ABC12	59	40-64	<65	YES
6	34001	ABC12	59	40-64	<65	YES
7	34001	ABC12	59	40-64	<65	YES

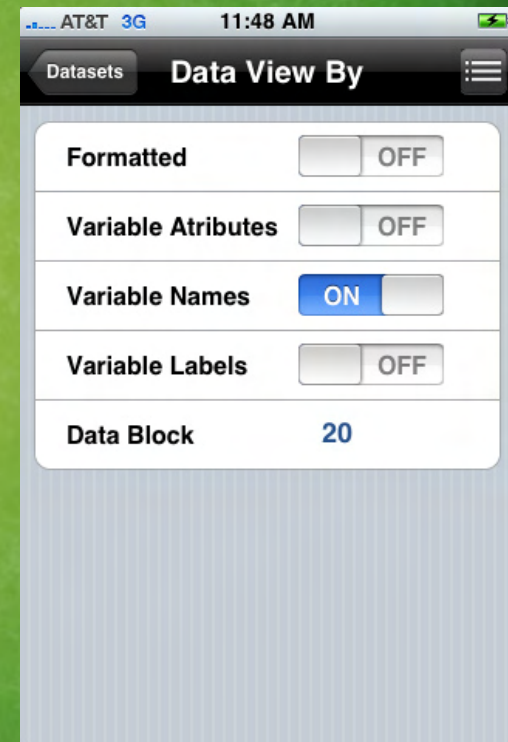


The screenshot shows an iPhone screen with a status bar at the top displaying 'AT&T 3G' and '11:47 AM'. The app's header bar is black with 'AE2' on the left and 'Dataset Chunk' in the center. Below the header is a list of age ranges. The first item, '1 - 20', is selected and has a blue checkmark on the right. The other items are '21 - 40', '41 - 60', '61 - 80', '81 - 100', '101 - 120', '121 - 140', '141 - 160', and '161 - 180'.

Dataset Chunk	Selection
1 - 20	✓
21 - 40	
41 - 60	
61 - 80	
81 - 100	
101 - 120	
121 - 140	
141 - 160	
161 - 180	

Step 4 – Change View Settings

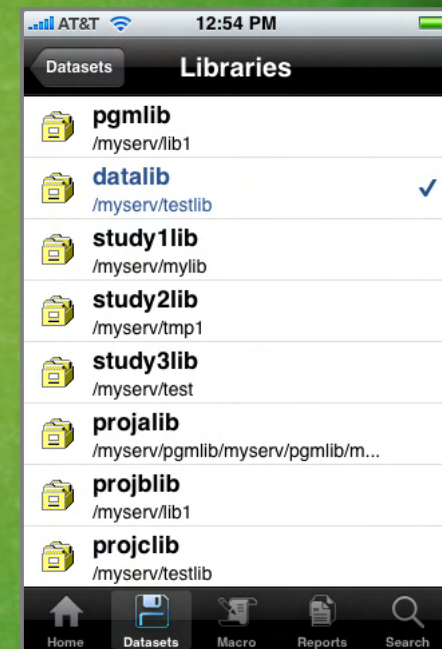
- Settings Button or Application Settings
 - User Defined Formats
 - Attributes (PROC CONTENTS)
 - Variable Name Column Header
 - Variable Label Column Header
 - Data Block or Chunk Size



SAS to XML for iPhone

- SAS Libraries Converted to XML

```
<Libraries>
  <Library id="1">
    <shortTitle>pgmlib</shortTitle>
    <longTitle></longTitle>
    <descriptionTitle>/myserv/lib1</descriptionTitle>
  </Library>
  <Library id="2">
    <shortTitle>datlib</shortTitle>
    <longTitle></longTitle>
    <descriptionTitle>/myserv/testlib</descriptionTitle>
  </Library>
  <Library id="3">
    <shortTitle>study</shortTitle>
    <longTitle></longTitle>
    <descriptionTitle>/myserv/testlib</descriptionTitle>
  </Library>
  ...
</Libraries>
```



Sample Macro PDF Output

- %STABANA Macro Stability Lab
 - %macro stabana (indata=, anatype=,
title1=, title2=, title3=, title4=, title5=,
title6=,
plotvref1=, plotvref2=, plotvaxis1=,
plotvaxis2=, plotvaxis3=, output=);
- PDF Output
 - Can be Emailed

Editing SAS Program on iPhone?



AppStore or Macro Store



Mobility and Ubiquity



User Friendly Interface



i Don't



Stone (40,000 B.C.)



iPhone 3G (2008)

MMS	X	X
Video recording	X	X
Videocall	X	X
Changeable memory cards	X	X
Running SAS Macros	X	✓

Conclusion

- Software Delivery and Distribution Significantly Changed with App Store
- SAS Macro is Powerful Customizable Business Intelligence Analytical Tool
- Barriers of SAS Tools Behind IT and Servers is now Broken and Delivered to Users via iPhone
- Ubiquity of Portable Computing such as iPhone Delivers Information to Masses



Questions

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