



< ddi >



Integrating Colectica with IBM SPSS Data Collection

Ipsos MORI

Who are Colectica?

The screenshot displays two overlapping windows. The top window is Microsoft Excel, showing a spreadsheet with columns for 'ID', 'Name', and 'Description'. The bottom window is Colectica Designer, showing a configuration screen for a 'Gender' question. The configuration includes fields for 'Name', 'Question Text', 'Instructions', and 'Response Options'. The 'Response Options' section shows a table with columns for 'Code', 'Coded Classification', and 'Response Description'. The 'Code' column contains 'Male, Female'. The 'Coded Classification' column is empty. The 'Response Description' column contains 'Male, Female'. The 'Selection Style' is set to 'Select one'. There is a checkbox for 'Blank values represent missing values'.

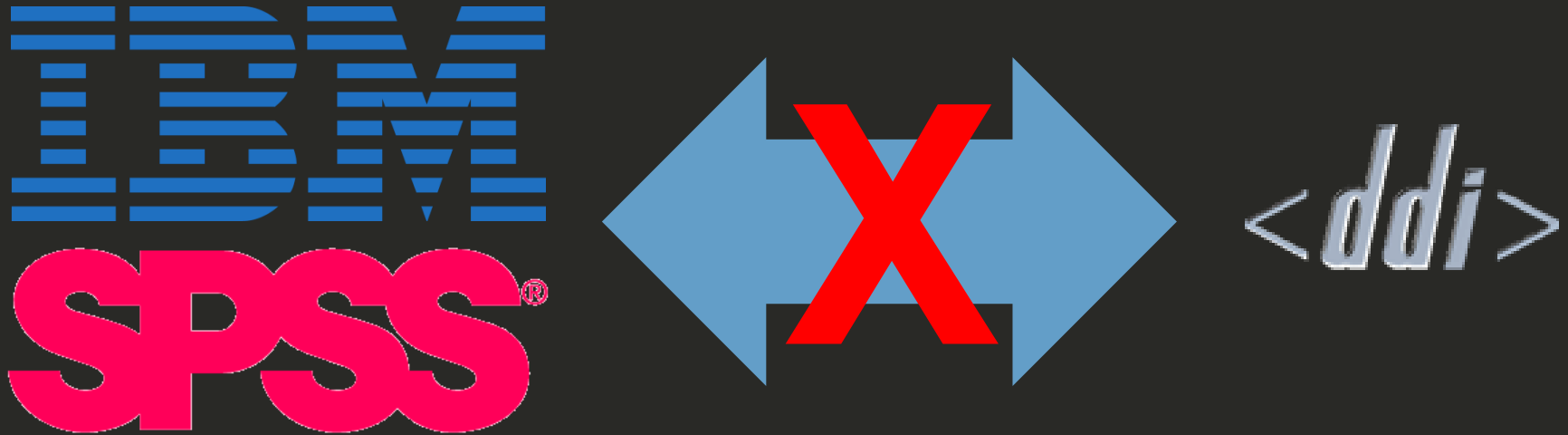
ID	Name	Description
A1PD1	How satisfied with life now	
A1PD2	Control of life in general	
A1PD3	Satisfied with self	
A1PD8	Rate contribution to others	

Code	Coded Classification	Response Description
Male, Female		Male, Female



- The DDI alliance provides a framework but no tools to work with the files
- Researchers, 3rd party companies and developers provide tools
- Some are free others are commercial
- Colectica provide arguably the most complete and sophisticated products to work with DDI.

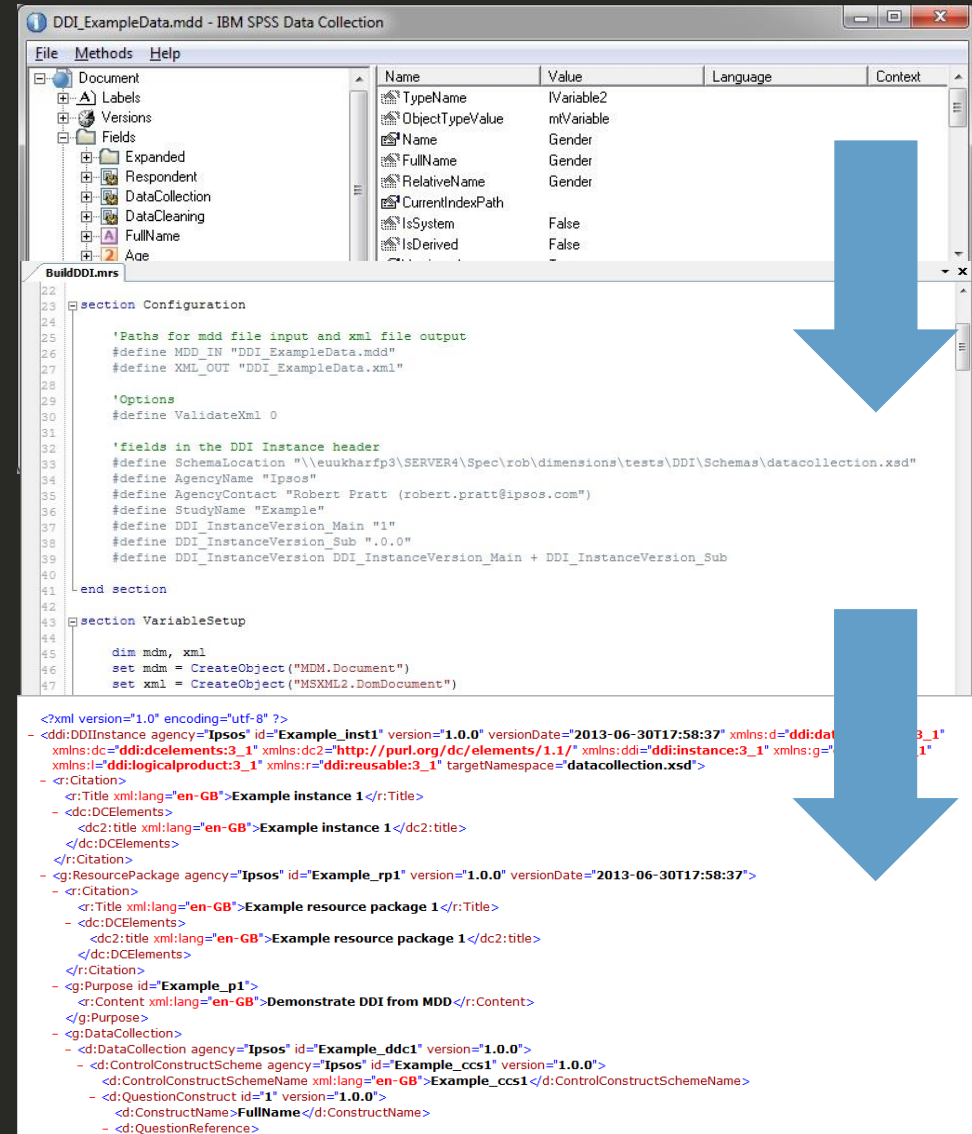
Disconnect between Survey Research & DDI



- No DDI Metadata Data Source Component
- No existing DDI tool to do a direct conversion
- We can use indirect conversion tools from DDI providers or in IBM SPSS Data Collection
- Limitations arise and information is lost when doing conversions, e.g. MDD to SPSS to DDI
- Why the conversion issues?
 - Different Schemas/Unimplemented features
 - Survey Routing/Instructions in different languages

Convert MDD to DDI

- IBM SPSS DC & DDI are two large and diverse schemas
- Due to different features it would be impossible to provide a complete conversion
- We tried a basic conversion in mrScriptBasic:
 - Example MDD
 - Read document object model
 - Write to XML DOM
 - Happy to share this script
- An alternative would be to write your own Data Source Component
 - How would you handle routing?



DDI_ExampleData.mdd - IBM SPSS Data Collection

Name	Value	Language	Context
TypeName	IVariable2		
ObjectTypeValue	mtVariable		
Name	Gender		
FullName	Gender		
RelativeName	Gender		
CurrentIndexPath			
IsSystem	False		
IsDerived	False		

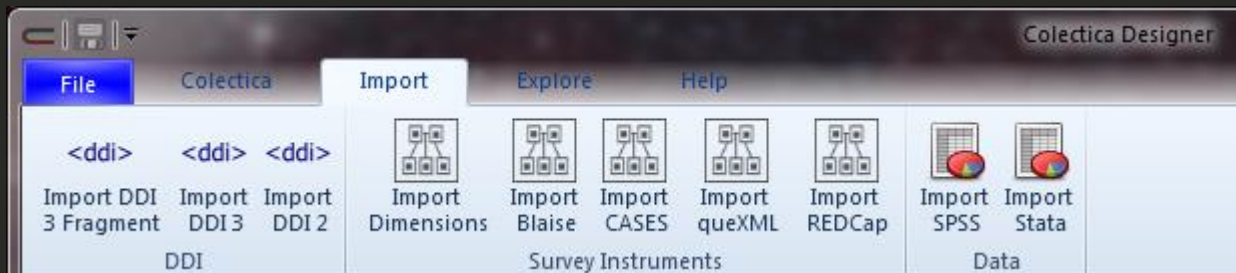
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BuildDDLmrs
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23 section Configuration
24
25 'Paths for mdd file input and xml file output
26 #define MDD_IN "DDI_ExampleData.mdd"
27 #define XML_OUT "DDI_ExampleData.xml"
28
29 'Options
30 #define ValidateXml 0
31
32 'fields in the DDI Instance header
33 #define SchemaLocation "\\euukharf3\SERVER4\Spec\rob\dimensions\tests\DDI\Schemas\datacollection.xsd"
34 #define AgencyName "Ipsos"
35 #define AgencyContact "Robert Pratt (robert.pratt@ipsos.com)"
36 #define StudyName "Example"
37 #define DDI_InstanceVersion_Main "1"
38 #define DDI_InstanceVersion_Sub ".0.0"
39 #define DDI_InstanceVersion DDI_InstanceVersion_Main + DDI_InstanceVersion_Sub
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41 end section
42
43 section VariableSetup
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45 dim mdm, xml
46 set mdm = CreateObject("MDM.Document")
47 set xml = CreateObject("MSXML2.DomDocument")
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<?xml version="1.0" encoding="utf-8" ?>
- <ddi:DDIInstance agency="Ipsos" id="Example_inst1" version="1.0.0" versionDate="2013-06-30T17:58:37" xmlns:d="ddi:dat
  xmlns:dc="ddi:dcelements:3_1" xmlns:dc2="http://purl.org/dc/elements/1.1/" xmlns:ddi="ddi:instance:3_1" xmlns:g="
  xmlns:="ddi:logicalproduct:3_1" xmlns:r="ddi:reusable:3_1" targetNamespace="datacollection.xsd">
- <r:Citation>
  <r:Title xml:lang="en-GB">Example instance 1</r:Title>
- <dc:DCElements>
  <dc2:title xml:lang="en-GB">Example instance 1</dc2:title>
</dc:DCElements>
</r:Citation>
- <g:ResourcePackage agency="Ipsos" id="Example_rp1" version="1.0.0" versionDate="2013-06-30T17:58:37">
  <r:Citation>
  <r:Title xml:lang="en-GB">Example resource package 1</r:Title>
- <dc:DCElements>
  <dc2:title xml:lang="en-GB">Example resource package 1</dc2:title>
</dc:DCElements>
</r:Citation>
- <g:Purpose id="Example_p1">
  <r:Content xml:lang="en-GB">Demonstrate DDI from MDD</r:Content>
</g:Purpose>
- <g:DataCollection>
  <d:DataCollection agency="Ipsos" id="Example_ddc1" version="1.0.0">
  - <d:ControlConstructScheme agency="Ipsos" id="Example_ccs1" version="1.0.0">
  <d:ControlConstructSchemeName xml:lang="en-GB">Example_ccs1</d:ControlConstructSchemeName>
  - <d:QuestionConstruct id="1" version="1.0.0">
  <d:ConstructName>FullName</d:ConstructName>
  - <d:QuestionReference>
```

Or, we could let the experts do it...



- Colectica Designer is the most complete desktop software for working with DDI. You can
 - Create surveys, including routing
 - Work with a library of questions
 - Publish your metadata to the web
 - Import from a variety of survey formats
- As of Version 5 Colectica Designer enables importing Dimensions (IBM SPSS DC) MDD files
 - All data types will be supported
 - Routing will be supported



Converting SPSS Dimensions to DDI 3.2

Information in Dimensions MDD XML Files

- Question definitions
 - Question text
 - Data type

```
<variable id="e509b6de-477b-4047-a68d-8e93c2c076d5" name="MOYR" type="5">
  <labels context="LABEL">
    <text context="QUESTION" xml:lang="en-GB">
      Our records show that {#cohortMembersFFText} {#WASWERETXT} not living at this
      address at the last interview on {#FF_Family.FFLSTI00}.

      When did {#cohortMembersFFText} move out of the address {#MOYRTXT} {#WASWERETXT}
      living at on {#FF_Family.FFLSTI00}?

      ADDRESS AT LAST INTERVIEW WAS:
      {#Sampledata.ALI_AddressLine1}, {#Sampledata.ALI_AddressLine2},
      {#Sampledata.ALI_AddressLine3}, {#Sampledata.ALI_Town}, {#Sampledata.ALI_County},
      {#Sampledata.ALI_OutwardPostcode}, {#Sampledata.ALI_InwardPostcode}

      INTERVIEWER: IF RESPONDENT HAD TWO ADDRESSES AT PREVIOUS INTERVIEW, AND CURRENT
      ADDRESS WAS WHERE THEY THEN LIVED SOME OF THE TIME, ASK:
      When did address at last interview stop being {#cohortMembersFFText}'s main
      address?
```

Converting SPSS Dimensions to DDI 3.2

Information in Dimensions MDD XML Files

- Source code with logical routing
 - mrScriptBasic language, much like VBScript

```
if useECS then
  sbCheckOffPath(IMSerial)
  if IMSerial = null then
    IMSerial = fnSetNumeric(IMSerial, addressFromECS)
  end if
  if iom.Info.IsAutoAnswer then
    IMSerial = getRandomAddress(sampleFilenameFull)
    IMSerial.Show()
  end if
else
  IMSERIAL.Ask()
  if iom.Info.IsAutoAnswer then
    IMSerial = getRandomAddress(sampleFilenameFull)
    IMSerial.Show()
  end if
end if
```

Converting SPSS Dimensions to DDI 3.2

Mapping to DDI

1. Extract question information from the XML
2. Create a grammar for mrScriptBasic
3. Parse the mrScriptBasic into an Abstract Syntax Tree
 - A. Find patterns that affect control flow
 - Map to DDI ControlConstructs
 - B. Find {questionName}.Ask() method calls
 - Map to DDI QuestionConstructs
 - Reference the QuestionItems created in step 1

Typical Workflow

