

## Analysis Service

Analysis service provides a way to conduct statistical analysis upon a collection of selected dataset and produce results in a desired format. To perform analyses on the dataset, a user chooses from statistical methods offered by an Analysis Engine encapsulated by the service (SPSS or similar professional packages). Using the experiment schemas and metadata, the service is able to generate a set of possible entries for each statistical method, which user can use to fine tune the analysis (specify test variables, groupings etc). The Analysis service processes the requested analysis and returns the results to user upon completion. The result will be in XML format which could be easily converted to other required formats.

The main web method in Analysis service would be *DoAnalysis* which takes a statistics query and the name of the statistics method as input parameters. And it returns a complex data type including a file name and the actual file data stream.

Input:

- Query: composed of statistics scripts, database queries (when necessary) and any other scripts required by an analysis engine.
- Method: name or code representing the appropriate statistics method from a list

Output:

- A self defined complex datatype including file data buffer which could be de-serialized at the client side.

A segment of the WSDL description for this service is presented as following:

```
<s:element name="DoAnalysis">
  <s:complexType>
    <s:sequence>
      <s:element minOccurs="0" maxOccurs="1" name="query"
type="s:string" />
      <s:element minOccurs="1" maxOccurs="1" name="method"
type="s:int" />
    </s:sequence>
  </s:complexType>
</s:element>
```