



Dear friends of Survey Solutions,

We are happy to inform you about our new release of Survey Solutions 3.0. This release represents a major milestone in the Survey Solutions development. We are bringing to our users the power of C# as a language for question validations and conditions. Now, Survey Solutions can validate data using algorithms of arbitrary complexity. The C# integration into Survey Solutions is done in such a way that the users who just started learning our system could still use a simple syntax to write their validations and conditions. However, you can enrich your arsenal of logical operators and simple functions with hundreds of functions and methods available in C# and by LINQ query language. You will appreciate the simplicity and flexibility of new functionality for writing validations and conditions for rosters and groups; string functions for validating text questions; functions that calculates distances between GPS coordinates, data and time functions, and hundreds other functions and methods.

Why C#? Because:

- C# is the language the Survey Solution is written on and so the validation and conditional expressions written on C# can be seamlessly integrated into the system.
- C# is a modern, object-oriented language capable of handling problems of any complexity.
- C# is one of the most popular programming languages and there are many people around the world who can program in C#.

The new language enables writing validation conditions for the following common situations:

*Ensuring that there is one and only one household head:*

```
relationToHead==1 && (hhRoster.Count(x=>x.relationToHead==1)==1)
```

*Confirming that the household head's spouse cannot be more 45 years younger than the head:*

```
relationToHead==2 && (hhRoster.Count(x=>x.relationToHead==1 && x.age-45>age)==0)
```

*Ensuring that the household consumed at least one food item in the food consumption module:*

```
foodConsumptionRoster.Count(x=>x.consumedFoodItem)>=0
```

*Check that the description of the respondent's job is sufficiently long (e.g., 3 characters):*

```
jobDescription.Length>=3
```

*Require GPS measures of accuracy better than  $\pm 15$  meters:*

```
gpsMeasure.Accuracy<15
```

*Interview date must be in November, 2014*

```
interviewDate.Month==11 && interviewDate.Year==2014
```

Surveys Solutions now has all the components of an integrated CAPI system: survey management system; powerful validation language; flexible tablet interface; ability to work in both offline and online mode; rich survey reporting system; easy to use designer, and questionnaire tester for live questionnaire representation.

**With this release our system becomes truly a Solution for anybody who wants to collect high quality data.**

***Extension of Export functionality:*** In addition to C# language, the new version removes the limitation that only a HQ approved questionnaires can be exported. Now, any questionnaire on a HQ or Supervisor, regardless of its status, can be exported.

***Tab-delimited format for preloading, batch operations, and long lists:*** Survey Solutions is now using tab-delimited format for preloading, batch operations, and filling the long lists in the single choice and cascading questions. The Tab-delimited format can handle better the local scripts and punctuations.

We also did some changes and improvement in the tablet user interface. Back-end optimization improved responsiveness and stability of Questionnaire Designer. Some bugs were fixed and minor improvements were made throughout the system.

**What to expect in December:** Our November sprint will focus on refactoring, optimization and cleaning up our core infrastructure. Version 3.1 scheduled to be released early December will come leaner and faster. We also plan to do some changes in user interface for HQ, Supervisor, and Tablet applications.