ImageMap – REDCap User Guide

Note: there is a $100 one-time fee to activate this module in each REDCap project. User support is $100/hour.

Introduction:

This REDCap module replaces a text, radio, or checkbox field with an image that users can interact with to select one or more options. Specific applications include a body map (the over 70 body regions), a smile scale from 1-7 with facial expressions, and 3 representations of teeth and teeth surfaces. Future versions will allow admins and users to add additional maps via the module configuration.

Features

This module defines a new action tag: @IMAGEMAP.

Usage

To display one of the images above in a survey or data entry form, add a new field of type Text Box and include one of the following options in the Action Tags / Field Annotation (optional) field:

@IMAGEMAP=PAINMAP_MALE
@IMAGEMAP=PAINMAP_FEMALE
@IMAGEMAP=SMILE_SCALE
@IMAGEMAP=SINGLE_TOOTH
@IMAGEMAP=TEETH_SURFACE
@IMAGEMAP=TEETH
@IMAGEMAP=PIRADS
@IMAGEMAP=BEES

Each region of an image is associated with a key, for example the "Ankle (front-left)" of the female body diagram is linked to the key "f34". To find a particular key for a body part, please refer to the html files (map files) located in the folder maps. After selecting multiple body parts, the field containing the action tag @IMAGEMAP will have as value a string of comma-separated keys, e.g. "f36,f17,f18,f21". Similarly, if using the faces diagram, the field containing the action tag (i.e. @IMAGEMAP=SMILE_SCALE) will have the value corresponding to the face clicked, which ranges from 1 to 7.

What field types are supported?

If the imagemap uses 'Single-Select' this means that only one region can be selected at a time. For this type of map you should use a text or radio field. The benefit of using a radio field is that you could add custom labels to the selected value that would appear with piping or in exports with labels. You MUST make sure the enumerated values for your question match the options defined by the imagemap.
If, on the other hand, your map supports ‘Multi-Select’, then you can choose either a text or checkbox question type. Text is simpler and multiple regions will be comma-separated in the input value. A checkbox allows you to do individual branching based upon selected regions. For example, you could have specific questions that apply if someone checks any head or neck region on the pain map.

**Setup Image Map Field**

Once the REDCap Image Map module is activated, the module can replace a text, radio, or checkbox field with an interactive image.

**Simple implementation of image maps:**
- Add a text box with the Action tag `@IMAGEMAP:"Name of image map"`.
- This method is great if you just want to capture the selections for analysis later.
- It will store your data as: "J23, K4, B2" in a single variable.

**Advanced implementation of image maps:**
- Add a checkbox with the action tag `@IMAGEMAP:"Name of image map"`.
- Add correct coding for each option in the desired image map.
- Use this method if you plan on basing branching logic of your selections in this image map.
- It will store your data as a set of unique checkbox options that are either checked or unchecked. (This option can yield a large number of sub-variables for the larger image maps).

**Text Field – Simple Implementation**

1. Click on `@Action Tags`. 
2. Click on the [Add] to add the “ImageMap” Action Tag. Click on [Full Documentation] to see all Image Maps, field specifications and Enums (enumerated choice values) for each image map.

After clicking on “Full Documentation” there is an option to download a Data Dictionary with all of the Image Map specifications by clicking on the “Download Example Instrument” button.

3. Add `=ImageMapName` after the ImageMap Action Tag.
Here is what image map looks like in a survey with 4 body regions selected by respondent.
Checkbox Field – Advanced Implementation

1. Click on @ActionTags. Add the name of the image to the ImageMap Action Tag.
2. Add the enumerated values, one on each line, for the body area choices to the “Choices” box.

Quickly find Enums here:

Copy the Enums and paste them into the “Choices” box.
Now, if needed, you can add a field with branching logic to have specific questions that apply if someone checks any shoulder or back region on the pain map.
Data Export

Text Box Field – Single Select
Export Data in REDCap project.

Checkbox Field – Multi-Select

Exported data into csv file