Heuristic Evaluation: Team Swiss Interactive Prototype 1

Ben Hill, Steve Krumholz, Brian Shih, Rob Quimby

Since for this first prototype most of the core interaction was not yet implemented, it was difficult to evaluate heuristically. The evaluation results are presented based upon the appearance of the interface and the expected interaction. Our biggest concern at this stage is probably the pervasive use of database terminology, instead of language that would be more familiar to an average user. Clarification of these terms would greatly help the usability of this interface.

NB: The number of stars next to a heuristic denotes the number of people greater than one that noted this violation in their evaluation. Thus, *** means everyone on the evaluation team noticed this as an issue.

*1. **[H2, H8, H10 – Speak the User's Language, Aesthetic and minimalist design, Help and documentation] (Severity 1)** – There is a "Directions" section of the toolbar that only holds one "Directions…" button (though I doubt this is the final design). If this section is really only for directions, then perhaps they can be simply written here in a collapsible section. If it is for all types of help, then a better title is needed. A label such as "Help" might be clearer, since "Directions" may have multiple meanings.

2. **[H8 – Aesthetic and minimalist design] (Severity 1)** – If the data collection selected is the only thing under the heading of "Data Collection" in the toolbar, then the "Current Data Collection:" label is extraneous – just change the toolbar heading to "Current Data Collection".

3. **[H2 – Match between system and the real world] (Severity 2)** – Is the "Modify…" button intended to modify the current data collection or to change to a different data collection? (Right now it appears to be both.) These two operations should be clarified and separated.

4. **[H4 – Consistency and standards] (Severity 2)** – If the box that says "Data Collection 1" is not directly editable, it should not be presented as a text box. Use a label instead.

*5. **[H4 – Consistency and standards] (Severity 3)** – *(Modify Data Collection window)* What do the "Create New" and "Save as New" buttons do? You need to clarify and disambiguate these terms. Is it possible to work with more than one data collection at once? If not, then the box should not be so big. Also, the "Rename", "Delete", and similar buttons are not grayed out when there is no selection. (*Programming note:* clicking "Remove" in the "Associated Mail Merge Documents" box with no argument selected crashes VB)

***6. **[H2, H4 – Match between system and real world, Consistency and standards] (Severity 3)** – *(Modify Data Collection window)* Terminology in this screen is at times confusing or ambiguous. Although your primary persona is a power user, "data collection", "database", and "data" all sound very similar and could be easily confused – consider revising these terms.

***7. **[H2 Speak the User's Language] (Severity 4)** - The entire interface is laced with terms like "data collection", "fields", "linked fields", "record", "group" and the like, that are probably a lot more meaningful to database programmers than to everyday users.

8. **[H8 – Aesthetic and minimalist design] (Severity 1)** – *(Modify Data Collection window)* The "Edit Fields" group box is nested within the "Data Fields" group box. This is GUI Blooper 23b.

*9. **[H7 – Flexibility and efficiency of use] (Severity 2)** – *(Modify Data Collection window)* The edit commands (undo, redo, cut, copy, paste) are presented as buttons with icons only, no labels. This is unusable for someone unfamiliar with the icons, as well as an accessibility problem. If a user knows the operation well enough to recognize the icon without a label, are they not likely to also know the shortcut key?

10. **[H4 – Consistency and standards] (Severity 2)** – *(Modify Data Collection window)* The "Edit Fields" group box contains controls for working with both fields and records, a conflict in terminology.

*11. **[H4 – Consistency and standards] (Severity 2)** – *(Link to Current Data Fields window)* The "Link Selected Fields" button is not grayed out after the fields are linked. (*Programming note*: This means that the fields can be linked multiple times, so that the link cannot be removed).

***12. **[H2, H8 – Match between system and real world, Aesthetic and minimalist design] (Severity 3)** – *(Link to Current Data Fields window)* The "Add Data Method" selection is worded in a confusing manner, such that I do not understand the purpose for its operation. It seems that the second method for adding data would be an infrequent exception. Perhaps it could be hidden or accessed in a different way.

*13. **[H1 Simple and Natural Dialogue/H2 Speak the User's Language] (Severity 3)** - I am not entirely sure what the linking does. What are the "current data selection fields" and what are the "selected database fields?" Perhaps functionality would clarify this, but you might want to consider replacing that text with the actual filenames that you are linking (assuming that is what you are linking). Also, the instructions at the top of the page use the same confusing and technical terminology that may confuse a novice user.

14. **[H4 – Consistency and standards] (Severity 2)** – *(Link to Current Data Fields window)* The operation of the "Select Fields to Add" box that pops up when adding more data is unclear. What happens if there are duplicate fields in different databases? For example, if I choose and link a database that has a FirstName field to add to a data

collection that has that field, but I do not check the FirstName box in the "Select Fields to Add" box, what happens? Is the field added but blank, or not added at all, or something else? If this box behaves differently than when it appears for the first time, it should not look identical.

*15. **[H4 – Consistency and standards] (Severity 2)** – In the "Groups" section of the toolbar, there are both "New Group" and "New Condition" buttons. Do conditions only act on groups? If not, then they should not be grouped together. Perhaps a better explanation or terminology for "Groups" and "Conditions" is needed.

16. **[H4 – Consistency and standards] (Severity 2)** – If the box that says "LastName, FirstName" is not directly editable, it should not be presented as a text box. Use a label instead.

17. **[H1 – Visibility of system status] (Severity 3)** – The "Preview and Edit" button establishes a mode that is not sufficiently distinguishable from the normal mode. Better feedback is needed to alert the user to the mode change. This may be more or less of a problem depending on how you implement the preview mode.

*18. **[H4 – Consistency and standards] (Severity 2)** – The preview navigation buttons are not grayed out when not in preview mode. Also, their operation is not immediately evident.

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20. **[H1 – Simple and Natural Dialogue] (Severity 1)** - In the "Modify Data Collection" box, the "OK/Cancel/Help" buttons are in the top right, which to me maps only to the functionality at the top of the screen. As a user, I might tend to click OK after completing the top two boxes, without entering any data into the data fields.

*21. **[H3 – Minimize the User's Memory Load] (Severity 2)** - It would be nice to have a suggested file type whenever the "Open file" dialog box is presented; that way the user doesn't have to remember exactly what they're looking for.

22. **[H4 – Consistency] (Severity 2)** - The buttons to select document type look just like the buttons that you click on to bring up menus, and offer no cue as to how they work. Maybe a radio button system or something? Or are you supposed to be able to select no document type?

23. **[H3 – Minimize User Memory Load] (Severity 1)** - It might be nice if the system said something in the large, white, blank boxes (fields/groups). Something like "click

here to add a field" or "click here to modify groups" would be great. A large empty box with no apparent functionality is confusing and creates friction.

24. **[H4 – Consistency] (Severity 1)** - In the "More Output Options" screen, what does "Actions" mean? It might be because I don't know a lot about what mail merges can do, but that term doesn't show up anywhere else in the interface and I'm confused as to what it means.

25. [H1 – Dialogue] (Severity 0) - You cut off the "y" at the top of the "link to current data fields screen".

26. **[H6 – Clearly Marked Exits] (Severity 3)** - When a user has entered the "Add Data" dialog, the cancel option doesn't seem to let them cancel, but instead goes to the "Select Fields to Add" dialog box.

27. **[H10 – Help and documentation] (Severity 3)** - Not sure if it's just not done yet, but the "modify output sorting" box is really confusing. I have no clue how to use it.

28. **[H7 – Shortcuts] (Severity 2)** - I know you're supposed to drag and drop from the fields to the document, but only because I read your report. How will new users know this? What if I don't think to drag and drop – is there another way I can get those fields into the document?

29. **[H5 – Feedback] (Severity 1)** - I can click on the document type buttons, and then click them again to have them deselect. What does this do to the document? When I click labels does it change the document to label format? If so, when I deselect it, what happens? Anything?

30. **[H3 – Minimize User Memory Load] (Severity 2)** - The function of the "Update all data now" button is unclear to me. I would think that I would always want my data to be updated, and thus never really use this. The presence of the button makes me think that I will need to click it to actually have the data I have imported mean anything to the file, which creates friction with my short-term memory, since I would always be afraid that I will forget to click that button. If the button was not necessary for the common purpose, I would quickly disregard it, and probably never think to use it again. Perhaps this can become available only when it is necessary (though, again, I don't know when it would be necessary – if there is a good reason that I can't think of, then by all means leave it).

31. **[H5 – Feedback] (Severity 1)** - For the dialog that pops up to "confirm send-all" you ask a yes/no question "are you sure….?" You then provide the options "OK" and "Cancel." While OK and Cancel are generally the default options on such dialogues, they don't actually answer the questions well. "yes" and "cancel" would be better, or a re-wording of the question. Further, the "e-mail sent" dialog after you click "OK" is kind of annoying. That information can be presented elsewhere or you could have a box that gives a status bar on the sending of the e-mail (since it will take some time) and have a checkbox that says "close this dialog when emailing is done" so that the user can watch

the email status an click "OK" when it is complete, or just default to letting the dialog close and getting on with their lives.

We had a few more problems noted, such as "[H5 – Feedback] Nothing I do does anything," but we think they can all be summed up by saying a completed prototype would probably work better. There are clearly a lot of things missing, but it looks like on the whole you guys are headed in the right direction. Less cryptic terminology would be nice, and we can imagine that once the fairly ubiquitous help buttons actually work, they'll be useful. All in all, though, it was relatively hard to evaluate the prototype, because it is obviously far from complete – we couldn't even complete the first task scenario presented with it.

Appendix: Individual evaluations

Brian Shih
11.1.2005

<u>Team Swiss Heuristic Evaluation</u>

1. [H10 Help and documentation] (severity 2)
    At the bottom of the output I have no idea what the box with the back/forward
    arrows around it is supposed to contain. This might be a product of you simply
    not having any arbitrary data in the form, but I don't know what I would expect to
    be in there.
2. [H10 Help and documentation] (severity 1)
    It might be helpful in the "more output options" screen to have a button that
    shows what common filters you can apply to the output. At least that's what I
    assume you're supposed to add to the filter output box.
3. [H4 Consistency] (severity 1)
    In the "more output options" screen, what does "actions" mean? It might be
    because I don't know a lot about what mail merges can do, but that term doesn't
    show up anywhere else in the interface and I'm confused as to what it means.
4. [H1 Dialogue] (severity 1)
    In the "modify data collection" screen, what does the save as new button do? I see
    that you can add new data collections and rename old ones – does save as new
    just save an existing one with a different name? (sort of like duplicating one and
    renaming it)
5. [H1 Dialogue] (severity 0)
    You cut off the "y" at the top of the "link to current data fields screen".
6. [H5 Feedback] (severity 1)
    On the "link to current data fields screen", it's hard to keep track of which side
    (left or right) is the data I'm importing versus the one I'm importing into.
7. [H2 User's language] (severity 1)
    In the same vein as the above one, it's hard to tell the difference between "data
    collection" and "database". I know one is the one you're working with in the mail
    merge while the other is the .xls file or whatever you're importing, but it's still
    some tricky terminology.
8. [H1 Dialogue] (severity 1)
    In the "link to current data fields screen", what does the 2nd option in add data
    method do? Does it create a field in the data collection that has "yes" for every
    single field in the database that has a value? Or does it create multiple fields (one
    for each field in the database you've selected)? It's just a little confusing as to
    what it's designed to do. Again, this might because I have no experience doing
    mail merges in the current form, but to a new user, this is awkward.
9. [H10 Help and documentation] (severity 1)
    Not sure if it's just not done yet, but the "modify output sorting" box is really
    confusing. I have no clue how to use it.

10. [H7 Shortcuts] (severity 1)
   I know you're supposed to drag and drop from the fields to the document, but only because I read your report. How will new users know this? What if I don't think to drag and drop – is there another way I can get those fields into the document?

11. [H1 Dialogue] (severity 3)
   I don't really know what "groups" are. Do all groups have to have a condition? Are conditions classified as groups? I know you don't have that functionality, but I'm not sure I grasp how groups, conditions, and the rest of your stuff works together.

12. [H5 Feedback] (severity 1)
   I can click on the document type buttons, and then click them again to have them deselect. What does this do to the document? When I click labels does it change the document to label format? If so, when I deselect it, what happens? Anything?

Steve Krumholz

1. [H1 Simple and Natural Dialogue] (Severity 1)
   a. In the "Modify Data Collection" box, the "OK/Cancel/Help" buttons are in the top right, which, to me, paths only to the functionality at the top of the screen. As a user, I might tend to click OK when I liked my selections in the top two boxes, without having first entered any data into the data fields.
2. [H2 Speak the User's Language] (Severity 2)
   a. In the menu bar on the right side of the Word document, I might recommend changing "Directions" to "Instructions." Instructions has one clear meaning, directions can mean different things. Since you have the space, you might even want to write "How to do a mail merge" to be even more explicit.
3. [H2 Speak the User's Language] (Severity 4)
   a. I am very new to the concept of mail merging, but I have no idea what a "Field" or a "Group" is. I think this might become clearer when the interface actually gets implemented, but "field" and "group" are terms that come up a whole bunch in your documentation, and represent functionality that, as far as I can tell, is very important. However, I just don't know what it does by name. This creates a great deal of friction right off of the bat, since my first impression of this interface makes me feel like I am not smart or experienced enough to understand these technical terms.
4. [H2 Speak the User's Language] (Severity 3)
   a. "Data" implies numbers to me, not names/addresses/personal information. Though the information that *you* want to process is simply data, the information that *I* want to process is names/people/addresses. "Add data" does not map to "import a file of address information" in my mind. I can't really think of a better term, but I think that one exists that might be a little more clear.
5. [H4 Consistency/H7 Shortcuts] (Severity 1)
   a. Just want to make sure that, in the "Data Fields" box, you are planning on allowing the user to use <ctrl> c, x, v, z commands in addition to the "cut, copy, paste, undo/redo" functions to remain consistent with other Microsoft functionality.
6. [H3 Minimize User Memory Load] (Severity 1)
   a. It might be nice if the system said something in the large, white, blank boxes (fields/groups). Something like "click here to add a field" or "click here to modify groups" would be great. A large empty box with no apparent functionality is confusing and creates friction.
7. [H1 Simple and Natural Dialogue] (Severity 3)
   a. I actually have no idea what anything but the "preview and edit" button does in the Output section of the sidebar. Again, this is probably something that will be much more apparent when information actually exists, and the user can visualize what is going on, but at this point I am very confused (especially by the text box with blue arrows).

8. [H1 Simple and Natural Dialogue/H2 Speak the User's Language] (Severity 4)
    a. I am not entirely sure what the linking does. What are the "current data selection fields" and what are the "selected database fields?" Perhaps functionality would clarify this, but you might want to consider replacing that text with the actual filenames that you are linking (assuming that is what you are linking). Also, the instructions at the top of the page use the same confusing and technical terminology that loses an ignorant novice like myself. I don't really know what a "Data Method" is, either. Finally (and this is probably just a bug that you can work out), if I double-click "link" in the link screen, it turns the grey link black, and then when I click "remove link" the link doesn't go away.
9. [H3 Minimize User Memory Load] (Severity 2)
    a. The function of the "Update all data now" button is unclear to me. I would think that I would always want my data to be updated, and thus never really use this. The presence of the button makes me think that I will need to click it to actually have the data I have imported mean anything to the file, which creates friction with my short-term memory, since I would always be afraid that I will forget to click that button. If the button was not necessary for the common purpose, I would quickly disregard it, and probably never think to use it again. Perhaps this can become available only when it is necessary (though, again, I don't know when it would be necessary – if there is a good reason that I can't think of, then by all means leave it).
10. [H1 Simple and Natural Dialogue] (Severity 1)
    a. The bottom two buttons on your sidebar – "Print all" and "More options" – are these part of the "output" section, or separate. To me, it looks like they are part of "output," which is fine, and the "More Options" screen seems to focus on printing and output, but I just wanted to make sure that this was the case. Also, "output" is an incredibly broad and multi-meaning word (an H2 error), and you might want to consider its word choice – it would be nice if it reflected more specifically what the section does. Output to where? The computer? A file? A printer? All of the above?
11. [H5 Feedback] (Severity 1)
    a. For the dialog that pops up to "confirm send-all" you ask a yes/no question "are you sure….?" You then provide the options "OK" and "Cancel." While OK and Cancel are generally the default options on such dialogues, they don't actually answer the questions well. "yes" and "cancel" would be better, or a re-wording of the question. Further, the "e-mail sent" dialog after you click "OK" is kind of annoying. That information can be presented elsewhere or you could have a box that gives a status bar on the sending of the e-mail (since it will take some time) and have a checkbox that says "close this dialog when emailing is done" so that the user can watch the email status an click "OK" when it is complete, or just default to letting the dialog close and getting on with their lives.

Robert Quimby
HFID Heuristic Evaluation
Evaluation of Team Swiss

1. [H6 Clearly Marked Exits] (Severity 3)
    When a user has entered the "Add Data" dialog, the cancel option doesn't seem to let them cancel, but instead goes to the "Select Fields to Add" dialog box.

2. [H4 Consistency] (Severity 3)
    There are a lot of references to different types of data (data collections, data fields, just plain data…) with little to no clarification as to what each different term means.

3. [H10 Help and documentation] (Severity 2)
    You do an excellent job of providing help buttons in many places, but this makes the places where they aren't available (when adding data, modifying sorting) a little more problematic, because the user is more likely to barge in before they know what they're doing if they expect help to be available. This is especially annoying with the modal dialogs presented when adding data.

4. [H3 Minimize the User's Memory Load] (Severity 2)
    It would be nice to have a suggested file type whenever the "Open file" dialog box is presented; that way the user doesn't have to remember exactly what they're looking for.

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    The buttons to select document type look just like the buttons that you click on to bring up menus, and offer no cue as to how they work. Maybe a radio button system or something?

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    The entire interface is laced with terms like "data collection", "fields", "linked fields", and the like, that are probably a lot more meaningful to database programmers than to everyday users.

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7. **[H8 – Aesthetic and minimalist design] {1}** – *(Modify Data Collection window)* The "Edit Fields" group box is nested within the "Data Fields" group box. This is GUI Blooper 23b.

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