Fwd: Mobile HCI 2015 Papers Program notification - #280

Vidya Setlur to Benjamin, Juhee

Woot!

---------- Forwarded message ----------
From: <paperchairs@mobilehci2015.acm.org>
Date: Thu, Apr 16, 2015 at 6:38 AM
Subject: Mobile HCI 2015 Papers Program notification - #280
To: vidya.setlur@gmail.com
Cc: paperchairs@mobilehci2015.acm.org

Dear Vidya Setlur -

We are pleased to inform you that your submission,

280 - GraphTiles: A Visual Interface for Supporting Browsing and Imprecise Mobile Search

has been CONDITIONALLY accepted for publication. The final reviews for your submission are included below.

MobileHCI 2015 had 234 valid submissions; of these, 59 were accepted, for an acceptance rate of 25.2%. The decisions as to which submissions to accept were made after careful review by a number of highly qualified experts from around the world. We had to be very selective and you should be very proud of your accomplishment.

Please read the remainder of this email carefully, as it lists several deliverables and deadlines that you must adhere to.

Conditional acceptance means that you must fulfil particular requests (if any were made) by the Associate Chair to revise your paper. This means that the Associate Chairs will be looking at your final version again to see if you have followed their specific recommendations.

In addition, some papers are being shepherded. The authors of these papers are asked to work more closely with a program committee member assigned to help you with this revision - note that this may not be the associate chair that originally handled your submission.

Please check the meta-reviews of your paper (written by the Associate Chairs) to see if any such specific demands were made. As well, the Associate Chairs and reviewers will likely have made other suggestions - we suggest you read the reviews carefully and use these to craft an even better final paper.

You must submit your final version to the PCS system (see http://www.precisionconference.com/~sigchi) by *May 22*. You will be contacted only if there are problems with your final submission.

If your paper will require more interaction with a committee member, you will be contacted in the next few days and will set up an additional schedule for making revisions. Note that all papers will also require a short revision report, outlining the changes that you have made, when you submit your final version to PCS.

Please note that you should prepare your revision using the updated MobileHCI Archive format template available at http://www.sigchi.org/publications/chipubform.

After May 22, your paper will be checked by the AC, and also by the publisher. Please ensure that at least one of the paper's authors are available and responsive after the May 22 deadline to respond to AC or publisher queries.

Please remember to fulfil any actions your institute may require for papers submitted to conferences.

You are also encouraged to submit a Demo of your work where relevant. The MobileHCI 2015 Demo track provides a space for

researchers and practitioners to bring hands-on experiences to conference attendees. We want to see and try your Prototypes, Services, Devices, and Systems. They will also be archived and embedded on the abstract page of the ACM Digital Library. The deadline for demo submission is May 8, 2015. Instructions for preparing your submission are available on this web page:

http://mobilehci.acm.org/2015/calls_demos.html

Authors of accepted papers will go through a LIGHT-TOUCH REVIEWING of their demo submission to check for suitability. Authors only need to submit the following
- One page specification of the infrastructural requirements. Please specify which of the default facilities you intend to use and whether you have additional wishes. The Demonstrations Chairs will investigate infrastructure and equipment possibilities for the accepted demonstrations.
- Equipment and Resources
- A copy of your original archival submission (it need not be camera ready).

Please also consider upcoming deadlines for the doctoral consortium, industry case studies, posters, and tutorials. See http://mobilehci.acm.org/2015/index.html#calls

Lastly, the MobileHCI Conference requires that at least one author of an accepted paper registers before the early registration deadline, and attends the conference to present the paper. Online registration will be open by 4 May.

We are looking forward to meeting you at the conference in Copenhagen.

Congratulations!
Ken Hinckley and Hans Gellersen
MobileHCI 2015 Papers Co-Chairs

=============Reviews=========

------------------------ Submission 280, Review 4 -----------------------

Title: GraphTiles: A Visual Interface for Supporting Browsing and Imprecise Mobile Search

Reviewer: primary

Overall

   4 (Weak accept)

Inspiration

   2 (Some insipiring elements)

The Review

Expertise

   4 (Expert)

The Meta Review

   Summary:

   The authors present a 2-week diary study with 32 participants, which
   explores "difficult" mobile search experiences or queries. Using
   insights from the diary study the authors present GraphTiles, a mobile
   application designed to support imprecise and general searches on mobile
   phones. Finally the authors present the results of a controlled study in
   which they compare GraphTiles with the standard IMDB mobile search
   interface with 20 participants. Clearly a lot of work done and the

authors target a topic that's of interest and relevance to the Mobile
HCI community.

Meta-Review:

Overall the reviewers had many positive things to say about this paper.
For example, the paper is well-written (R1), it addresses a challenging
problem (R2), the GraphTiles prototype was well grounded by a
comprehensive diary study (R1, R2, R3), the GraphTiles approach looks
promising / interesting (R1, R2, R3) and the topic / paper is a good fit
for Mobile HCI (R1, R3).

However, there were also a number of questions and areas of concern
raised.

(1) R1 points to a perhaps unfair comparison between GraphTiles and IMDB,
given that GraphTiles is designed for fast searches while IMDB is not. R1
also raises the question of why the authors didn't do another
comparison to a more suitable interface? These need to be at least
discussed.

(2) R1 would like to see more discussion around the results themselves
– why certain results were obtained. Thus the authors are encouraged to
extend the results and discussion section and to add a more thorough
explanation of why certain findings have emerged.

(3) Issues were also raised over the generalizability of the results (R1,
R2, R3). How well would GraphTiles work with or scale to other content?
While I personally think that such an interface doesn't have to
necessarily scale or generalize to all mobile content, some discussion
around this and the potential limitations need to be included / fleshed
out in the paper.

(4) At present there's a disconnect between the dairy study and the
resulting interface (R2, R3) and I would tend to agree with this. It
would be great if the authors could connect these more. How did diary
study inform the design of GraphTiles?

(5) R3 also expressed concerns over how the terms "imprecise search",
"general search" and "browsing" were used. I think the authors
need to be careful here and to ensure they aren't causing confusion to
readers.

(6) R1 provides lots of food for thought and ideas to approach such a
problem from a theoretical perspective. While, I don't necessarily
think this is required for acceptance of this paper, the details provided
should certainly help the authors think about their work more deeply.

(7) Finally, all three reviewers include more minor questions / lots of
smaller areas of improvements.

Thus, these issues need to be discussed / clarified / addressed for the
paper to be accepted. However, overall I think the authors have done a
huge amount of work and I think the paper could be a very nice addition
to Mobile HCI as long as the appropriate fixes are made. For this reason
I've leaned towards an accept for this work.

I would encourage the authors to read through all the reviewer comments
carefully and to use them to improve their work. This will likely mean
lengthening the paper, which I think will help address the majority of
concerns and to add more discussion to the paper. At the moment the

authors have tried to fit way too much in, which means missing details
and a disconnect between the diary study and the actual mobile UI
designed. Also, as R2 points outs many areas of the evaluation are
glossed over. More details need to be added to help readers understand
example how the study was conducted, how searches were categorized and
how results were obtained.

------------------------ Submission 280, Review 1 ------------------------

Title: GraphTiles: A Visual Interface for Supporting Browsing and Imprecise Mobile Search

Reviewer: external

Overall

  3 (Neutral)

Inspiration

  2 (Some insipiring elements)

The Review

  SUMMARY
  In a diary study on users' information searches (web searches) on
  smartphones the authors find that users often had problems finding the
  desired information and needed to follow, on average, 2.5 of the links in
  the search result lists before finding the desired information (or
  aborting the search). Motivated by this, the authors narrow down the
  scope from general online searches (as explored in the diary study) and
  focus on search scenarios where the user searches for information
  contained within a definite and structured dataset, such as searching for
  movies where particular actors acted. The authors present GraphTiles, an
  interface for smartphones that is designed to support quick searches by
  displaying links between related information items (i.e., movies and
  actors). In a user experiment the authors compare users' search
  performance using the GraphTiles interface and using the IMDb-website
  (IMDb is a website that provides information about films, tv-programs,
  video games). The results show that the experiment participants solved
  search tasks about 42% faster with GraphTiles than when using the
  website.

  REVIEW
  Generally, I think this paper is well written. The paper it is easy to
  read and to understand for a non-native English speaker. The paper is
  well structured with mostly suitable explanations and the authors relate
  their work to the most important previous work. The topic is timely, is
  relevant to MobileHCI, and the presented interface exhibits a new
  visualisation feature and design aspects that support the visualisation
  of the relationships (connections) between search items.

  The strongest parts of the paper are the diary study with its results
  (which provide new data on smartphone users web-search behaviour) and the
  proposed GraphTiles interface, which seems to be a good design solution
  for the specific tasks that were used in the user experiment.
  Unfortunately, I think there are two major issues (partially and briefly
  mentioned by the authors) which need to be addressed and thoroughly
  discussed/clarified before this work is ready for publication.

1) Lack of considering alternative interfaces and missing explanations
for the results.
In the provided experiment and with the current GraphTiles interface
everything is "designed" for fast searches according to the PMP and
MPM tasks anatomy. On the contrary, the IMDb interface is certainly not
tuned for such browsing situations. The IMDb interface serves more and
other purposes and provides functionality other than searching for actors
and movies (as also pointed out by the authors). Accordingly, the
comparison between GraphTiles and IMDb seems somewhat "far fetched"
and perhaps "unfair". There is little doubt that the GraphTiles
design is a better way than what the IMDb interface provides when it
comes to optimize for quick PMP and MPM searches. However, if quick PMP
and MPM searches are the main objective, one can also imagine a simple
interface where the user selects the known actor name and then becomes a
horizontal scrollable list of the names of the actors' movies. Under
each of these movie titles there is an alphabetically sorted vertical
list only including the names of the actors that acted in the
corresponding movie. Such a design might not be as fun and visually
appealing as GraphTiles, but it might be quick for PMP searches. The
question arises why the authors did not compare their design to another
design that is also tuned and focused on searches among related items.
For example, a node-connection interface such as the Seattle Band Map
could have been used for comparison.

Furthermore, the current result discussion provides no explanations to
why the GraphTiles interface was so fast. Could it be that the IMDb
interface simply included much more visual distractors (text, links,
images, buttons) and/or that the clickable items in the IMDb interface
were much too small which made it hard for the user to navigate the
website. Perhaps the users sometimes accidentally clicked on a wrong
portion of the screen, which caused a totally new, and for the task
irrelevant, webpage to load. Which in turn did cost dismissal time. These
are my speculations about some possible reasons. It would have been nice
if the authors had provided a more through explanation (or an attempt)
behind the results of the experiment. Currently, we only know that
GraphTiles was faster. We have no convincing explanation for what made
the GraphTiles so fast (or IMDb so slow). I am aware that having used the
IMDb website, the authors most probably do not have any interaction logs
(e.g., how many times did users switch between webpages, did users
accidentally click irrelevant web-links, how fast did they find the
'Filmography'/'Known For' section (see further below) on the IMDb
webpage, etc.) that could provide information explaining/describing what
actually happened during searches on the IMDb website. This is
unfortunate. But perhaps the authors have logs from the GraphTiles
condition and could so provide information about issues such as how often
the users used the reordering feature. How much faster were users in
trials with reordering than without reordering? Furthermore, as sketched
at the end of the review, it seems as when using GraphTiles a user can
use one of two possible strategies to solve the search tasks. Perhaps
logs could perhaps tell which strategy was mostly used and how did the
two strategies differ in time.

2) Generalizability
The second issue that needs to be discussed regards the generalizability
of the GraphTiles interface. As the authors point out, it is questionable
whether and how the interface can be generalized, i.e., used in other
situations than when there is a "data base" in the back and the
system knows which items are related in what ways. And as pointed out
above, in such situations where the data is well-structured with known
relationships between items, it is not clear that GraphTiles is the best

solution/interface for PMP and MPM-type of queries. For example, it is difficult to imagine how GraphTiles could support Imprecise/General and Difficult queries such as "salmon recipes" (Table 1). Yes, if the GraphTiles interface was used as the front end on top of a data base with recipes, it might be useful. I think the authors need to discuss the generalizability of the design in more detail and perhaps also provide some ideas about how GraphTiles could be generalized.

Reasoning about various interface designs by analysing the necessary steps that are needed to solve a particular task can also reveal alternative designs. I was surprised to see that the authors did not try to tackle the problem space from a theoretical perspective. Below I describe how we could reason about the interface actions (screen taps/clicks, visual search, and scrolling operations) necessary to solve PMP and MPM tasks using the GraphTiles and the IMDb-interface. My description is based on the PMP task (the MPM task is basically the same) and uses an ad hoc "home-made" Keystroke Level Model-like approach. A recent paper by Batran and Dunlop "Enhancing KLM (Keystroke-Level Model) to Fit Touch Screen Mobile Devices, MobileHCI 2014" might be a helpful guide in this direction. I do not claim that my model analysis below is correct and I do not regard a model-based approach to be necessary for the paper. Nor do I claim that a model-based approach is any better than conducting a real user study (which provides empirical data and evidence). Instead, the purpose of the somewhat lengthy description is twofold: to contextualize a claimed lack of clarity in interface/task descriptions and to roughly exemplify how one could approach interface design solutions for such constrained and limited tasks such as PMP and MPM.

Based on the PMP task type let us assume the following. First, at the beginning of a task two persons are named. Name1 and Name2. For simplicity, let us assume that each person has acted in 8 movies and that each movie has 9 actors (the paper does not specify how many items existed, it only says that the "top movies linked to it as indicated by IMDb's own API call"). Furthermore, in a PMP task, the person shown in the first column is called C1P (Column 1 Person; the Name1 in the task prompt), the eight movies he has acted in are listed in the middle column. We call these movies M1 to M8. As each of the eight movies has nine actors (including C1P) we have a total of 8*8 actors in the right column. We call these actors C3P1 to C3P64 (Column 3 Person 1 to Column 3 Person 64) and assume that each of C3P1 to C3P64 has only acted in one of the movies M1 to M8 (as expressed in the paper "we asked participants to find THE [capitalized by reviewer] movie on which two given people collaborated"). Now to solve a PMP task, the user can follow one of two strategies. The first strategy is to sequentially work through M1 to M8, starting by selecting M1. This activates the reordering feature and the 8 actors that have acted in M1 are now positioned at the 8 topmost positions in Column 3 and are highlighted. The user now has to sequentially scroll through and scan the 8 topmost positions in the third column until having found the person with Name2, as earlier shown in the task prompt. If Name2 is not found in Column 3 the user clicks M2 in Column 2. The reordering feature "pushes" the 8 actors that acted in M2 to the top of Column 3. The user sequentially scrolls through the 8 highlighted (topmost) positions in Column 3. If Name2 is not found, the user clicks M3 in Column 2 and the search for Name2 in Column 3 is started again. In a worst-case situation the user has to click through all movies in the Column 2 and finds Name2 when having clicked on M8. Now the user can now "submit" M8 as the answer to the PMP-question. However, on AVERAGE the user will find Name2 when having clicked on M4.5, i.e., after having searched through half of the 10 movies listed in Column 2. The second strategy that can be used is to search Column 3 for

Name2 without bothering about the movies in Column 2. With this strategy, the user has to scroll through C3P1 to C3P64 in Column 3 until spotting Name2. When Name2 is found, the user clicks Name2 and the reordering feature is activated. The only movie that both Name1 and Name2 have acted in together is now pushed to the top of Column 2. The user can "submit" by clicking on this movie. In a worst-case situation Name2 is equal to C3P64 and the user has to scroll through and scan 64 actors in Column 3. However, on AVERAGE Name2 is equal to C3P32 and the user has to scroll through 32 actors in Column 3.

Now, let us assume that clicking on an item costs 1 second. Let us assume that 4 items can be displayed at the same time in one column (this is about what it looks like in Figure 2). Let us assume to visually scan 4 items in a column costs 4 seconds. Scrolling to the next 4 items in a column costs 2 seconds. Now, roughly, using the first strategy, on AVERAGE the user will need to click 4.5 movies (4.5*1 seconds). For each of the four first movies the user has to scroll through and visually scan 8 items in Column 3, 2 screen-heights of items, to realize that Name2 is not in Column 3. This costs 2*4 seconds of visual scanning and 2 seconds for the scrolling operation. Total 10 seconds per movie. In total 4 movies * 10 seconds = 40 seconds. To this we add the time for clicking 4.5 movies in the Column 2. We have 44.5 seconds. On AVERAGE, the Name2 is located in Column 3 when the 4.5th movie is selected in Column 2. In half of the times Name2 is located among the 4 first items in Column 3, in the other half Name2 is located among items 5 to 8. Thus on AVERAGE, the user needs to perform 0.5 scrolling operations and visually scan 1.5 screen-heights of images. Accordingly, to find Name2 when the 4.5th movie is selected in Column 2, the user needs on AVERAGE 0.5*2 seconds (scrolling) + 1.5*4 seconds (visually scanning) = 1 + 6 seconds = 7 seconds. With the first four movies where Name2 is not found we have a total of 44.5+7=51.5 second. Similarly, using the second strategy when starting searching for Name2 in Column 3, on average the Name2 is found as C3P32, the user needs to visually scan 8 screen-heights of items and perform 7 scrolling operations. The average time needed is 8*4 + 7*2 = 32 + 14 = 46 seconds. The difference to the first strategy is that the user does not need the intermediate 4.5 clicks on the movies in Column 2.

The authors write "To answer the question [a PMP question], participants used a phone to scroll in the right column to find the second person's node, and then scroll in the middle column to find the movie connecting two people, and select it". Thus, it seems as if the user had to use a strategy similar to the second strategy as described above. It is unclear why the user had to "scroll the middle column". If the second person's name (node) is found in Column 3, invoking the reordering feature ("With reordering, when users select a thumbnail from these columns [Column 2 and Column 3], GraphTiles highlights thumbnails linked to the selection and reorders to place them onscreen or nearly so".) would place the one and only "connecting" movie in Column 2 on-screen! It is thus unclear why the scrolling of the middle column was necessary. It is also unclear how often the reordering feature was used throughout the experiment. Anyway, let us move on to the IMDb-interface. Here, to what I can tell by inspecting the website (the authors do not describe how a task was solved using the IMDb-interface) the user can only use one strategy to solve a PMP task. First, the Name1 actor has to be searched using a text field. However, I ignore this initial step since the authors do not mention how the Name1 actor was searched. They also do not explain how the 'correct' Name1 appeared in Column 1 when the GrapTiles interface was used. I simply assume that each task started when Name1 was shown in Column 1 respectively when Name1 was loaded on the IMDb-site. On the IMDb-site, when Name1 is loaded I can scroll down to a section called 'Filmography'/'Known For'.

Here I get a horizontal scrollable list of images of the movies in which Name1 has acted in. Pretty similar to what is shown in Figure 1 in the rightmost screen. But in my case the list of movies is horizontal, in Figure 1 it seems as if this list is vertical. By clicking an image in the horizontal list, a new webpage for the selected movie is loaded and I can scroll down to a section called 'Cast & Crew'. In this section I see a horizontal scrollable list of images of the actors that acted in this film. I can use either the "back"-button or a screen-swipe to navigate back to the webpage about Name1. Accordingly, to solve a PMP task with the IMDb interface the user can only use a strategy similar to the first strategy described above. That is, working through the list of movies, one by one. And for each movie search in the 'Cast & Crew' section for Name2. If Name2 is not found, navigate back to the movie-list, select the next movie in the list and search its 'Cast & Crew' list.

I will save us the time, but a computation of the "theoretical" time needed to solve a PMP task using the IMDb interface can be done in a similar way.

Minors:
* Figure 1: there are no labels (a), (b), (c), (d) in the figure.
* page 2 "a visual search interface designed help mobile users": missing 'to' between 'designed' and 'help'.
* page 2 "and how much of an influence those searches have on difficulty": this sounds strange. How can searches influence difficulty?
* page 2 "in which participants record their own behavior [23]": why is there a reference to a paper here. With this reference here, it seems as if the diary study that was performed is reported already in the paper by Sohn et al. Is this correct?
* page 2 "three or more links were followed in results": sounds strange. Perhaps "three or more links in the result list were followed"?
* page 3 "or three or more links clicked in results". Perhaps "clicked in the result list"?
* page 4 "intermediate results to hone in on": hone -> home?
* page 5 "the consistent differences in MPM vs. PMP neighborhoods": What was the consistent differences, please explain.
* page 5 "with GraphTiles users almost twice as fast as IMDb web app users": perhaps 'users were almost' and 'as fast as when using the IMDb web app'
* references: [7] and [24] should probably also provide the corresponding URL. [14] is incomplete. Furthermore, this is the only reference with a DOI.

Expertise

   3 (Knowledgeable)

------------------------ Submission 280, Review 2 ------------------------

Title: GraphTiles: A Visual Interface for Supporting Browsing and Imprecise Mobile Search

Reviewer: external

Overall

   3 (Neutral)

Inspiration

2 (Some insipiring elements)

The Review

The authors are addressing a known and challenging problem in mobile
search -- how to support users in fulfilling information needs that go
beyond simple keyword lookup. Towards this end, the paper proposes a
mobile search interface called GraphTiles, which uses a column-based
layout to display and browse entity-relationships. A 20-user experiment
showed GraphTiles to be faster than the standard IMDb query interface
when completing search tasks focused on identifying actor and movie
relations. The design work was grounded on a two-week diary study of
mobile search that showed users often encounter and struggle with
'imprecise' searches. Although the GraphTiles interface seems to address
specific types of searches quite well, the overall contribution is not
strong. First, it is not clear how well the approach generalizes beyond
the current design and data domain(s). Second, similar yet more general
approaches for searching structured information spaces exist.

The proposed interface seems like an efficient way to browse structured
information spaces when the purpose is to find entities linked through
shared relations. However, fairly similar ideas for mobile exploratory
search and visualization over structured information spaces have been
proposed, such as mSpace Mobile by Wilson et al. (2006) and FaThumb by
Karlson et al. (2006). In fact, it seems like the GraphTiles interface
implements a special case of faceted browsing with the twist that one of
the dimensions appears multiple times. Also, the MuZeeker interface by
Larsen et al. (2010) addresses similar imprecise search tasks by using
filtering categories extracted from Wikipedia. A comparison of the pros
and cons of the proposed approach to previous works (e.g., faceted
browsing) would have helped highlight the original contributions of the
present work.

The authors themselves raise questions regarding the extent to which the
proposed approach scales with other types of content. This is one of my
major concerns with the paper, as well. Visual search interfaces are
great for getting an overview and recognizing people or items you've
seen, but in practical information seeking scenarios text is no less
important. It seems like the design might not scale that well as-is if
the goal is to access detailed information on a web page, for example.
Moreover, although the authors present GraphTiles as a graph
visualization approach, I believe the idea of using linked columns
(resembling a parallel coordinates view) to select, filter and highlight
related items applies also as a more general interaction framework into
structured data.

It's great to see that the authors grounded their design on an
exploratory diary study. Unfortunately its role in the overall narrative
of the paper is unclear. There's ample evidence in related works on
mobile search behaviors about the difficulties users have in fulfilling
inexact information needs. This makes the reported diary study feel
somewhat unnecessary in a shorter paper, over a more thorough literature
review. On the other hand, one could easily go into more detail about the
diary study results, e.g, the strategies people use to cope with
difficult imprecise searches and the associated design implications for
mobile search interfaces. I think there's a lot of potential in the
collected data set that the authors are not using to its full
effectiveness here.

In terms of the structure and presentation of the paper, trying to fit a literature review, diary study and its results, description of the GraphTiles interface and the experiment and its results in about 5 pages compromises the quality of the individual sections. This has also led to some important details on evaluation procedures getting glossed over. If the aim is to produce a smaller paper, a better option would have been to focus either on the diary study or the GraphTiles interface and its evaluation, not both. Alternatively, a more detailed treatment of both parts could have added substantially to the contribution of a longer paper. That being said, the paper was well written and easy to follow, aside from a few minor issues (see below).

With respect to inspiration, it's always interesting to see new visualizations being proposed for mobile search. Outside of their predictive features, current search interfaces are still primarily based on keyword querying. GraphTiles explores the wider mobile search design space that is more focused on facilitating discovery from structured data sources.

Comments addressing specific sections of the paper:
- The authors cite Kamvar et al.'s paper on mobile search on page 1 when discussing the challenges users have with mobile search. The association one might get from the text is that Kamvar et al. are suggesting mobile users would repeatedly reformulate their queries and access multiple results. In fact, I believe what Kamvar et al. found out was that mobile search sessions generally contain very few queries (less than when searching on a computer), which would indicate lack of reformulation. Perhaps another source should be used here?
- I didn't quite understand why the authors are relating GraphTiles to local/context-aware search in the Related Work section. As mentioned earlier, faceted search and browsing as well as various category-based interfaces using structured data would be a better match when it comes to ways to address complex mobile information needs.
- If the intention is to introduce diary studies as a information gathering method via citation, then the reference to Sohn et al. on page 2 would require additional description.
- I would not recommend placing Figure 1 on the title page, especially since the interface and different query types are not explained until page 4. One should ideally be able to understand the figure independent of the text.
- The authors quite rightly discuss the potential ambiguity between imprecise search and what might be termed as general browsing or casual searching. However, I believe it might have been possible to disambiguate between the two by employing a retrospective protocol to walk through the entries with the participants. Currently the narrative is mostly focused on imprecise searching -- understanding browsing behaviors would likely require more open ended evaluation tasks.
- The rationale for choosing the query type cutoff points (1+ queries, 3+ link selections, 2+ minutes of searching) isn't entirely clear. For example, classifying a search as imprecise if it requires more than one query seems a bit aggressive.
- One would have expected to find some discussion about the participants' subjective feedback on GraphTiles. If subjective feedback was collected, it might be useful in supporting the discussion about the pros and cons of GraphTiles with respect to standard query interfaces.

Related works the authors might want to include:
* Karlson, A., Robertson, G., Robbins, D., Czerwinski, M., & Smith. G. (2006). FaThumb: a facet-based interface for mobile search. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (pp. 711-720). New York, NY: ACM.

* Larsen, J. E., Halling, S., Sigurðsson, M., & Hansen, L. K. (2010).
MuZeeker: adapting a music search engine for mobile phones. In X. Jiang,
M. Y. Ma, and C. W. Chen (Eds.), Mobile Multimedia Processing (pp.
154-169). Berlin Heidelberg: Springer-Verlag.
* Wilson, M. L., Russell, A., Smith, D. A., & Schraefel, M. C. (2006).
mSpace Mobile: Exploring Support for Mobile Tasks. In Proceedings of the
20th BCS HCI Group conference in co-operation with ACM (pp. 193-202).
London: Springer.

Expertise

   4 (Expert)

------------------------ Submission 280, Review 3 ------------------------

Title: GraphTiles: A Visual Interface for Supporting Browsing and Imprecise Mobile Search

Reviewer: secondary

Overall

   3 (Neutral)

Inspiration

   2 (Some insipiring elements)

The Review

   The paper explores "GraphTiles", a graphical interface for browsing graph
   data on a mobile device.

   The authors present data that suggests that a significant portion of
   mobile searches are difficult due to their "imprecise" nature. The
   GraphTiles interface is proposed to facilitate those queries. A further
   user experiment indicates that browsing movies/actors in IMDb data is
   about twice as fast using GraphTiles, compared to IMDb's web interface.

   Overall this is a decent paper that I think would be a good fit for
   MobileHCI. The work is well motivated. I like how the paper starts out
   with the diary study and identifies a real problem users are having with
   mobile searches today. The definition of "imprecise searches" (> 1 query
   or >3 links clicked) seems reasonable, too. The one thing I did find a
   bit confusing was how the terms "imprecise search", "general search", and
   "browsing" are used seemingly interchangeably. I think the readability of
   the paper would improve if the authors either settled on one term (if
   they are in fact interchangeable), or call out what the differences are.

   My one concern is that there is a little bit of a disconnect between the
   problem the authors set out to solve (imprecise searches) and the
   solution that appears somewhat specific to IMBD queries. In their bullet
   list of contributions the authors state that "users were able to perform
   imprecise searches more quickly" with the proposed interface. This is
   true, but their experiment involved only IMBd data which naturally fits
   this interface very well (actors-movie graph, easy to visualize with
   actor's portraits and movie posters). I'm not convinced that the result
   generalizes to the general problem described in the first half of the
   paper (examples from the paper: "salmon recipes", "bathroom mirror"). The
   authors do acknowledge this limitation in the conclusion of the paper,
   which is positive. It would be nice to offer the reader a bit more,

though. Maybe some speculation on how this *could* work with other (less visual?) query types from the initial diary study?

A minor final comment. I found that the language in the Abstract and Introduction could be more concise. For example, in the very first sentence (Abstract), I would replace "mobiles" with "mobile devices". Also, the second sentence (Abstract) is quite difficult to parse: even after reading multiple times, I don't understand what "when input is difficult and distractions complicate recall" means. Finally, in the Introduction: "Ideally mobile users …". This phrase should probably be reworded to make it more accessible.

Expertise

2 (Passing Knowledge)

------------------------ Submission 280, Review 5 ------------------------

Title: GraphTiles: A Visual Interface for Supporting Browsing and Imprecise Mobile Search

Reviewer: secondary

Overall

4 (Weak accept)

Inspiration

3 (Many insipring elements)

The Review

This paper presents Graphtiles: a mobile search interface that supports browsing imprecise mobile search. It also reports one diary study and a controlled experiment about the design and validation of the interface.

Overall, I found the topic relevant, the idea interesting and inspiring, so I am in favor of accepting of this paper.

However, this paper also has a number of weak points that need to be fixed if accepted.

1) Lack of detailed description of the Graphtile interface. What are the features, and how do they behave? The video shows a little bit of what it looks like and how one can interact with it, but still missing a lot of information on how it exactly works. This part of information needs to be filled in.

2) How are the diary entries collected? Is it prompted? Or user fill it out by the end of the day? Why not log user's search behavior using a background logger? This affects the integrity of the data and the analysis.

3) The experiment is somewhat biased. Comparing Graphtiles with IMDb website is not a fair comparison as IMDb is not a search interface. Why not compare it google? Also, what are the exact tasks?

I believe 1) can be addressed in a revision. Part of the 2) and 3) can also be addressed by providing more details, and the remaining part can be discussed in the limitation section. If the authors can make the above

changes, I will support its acceptance as I like the topic and solution proposed in the paper.

Expertise

3 (Knowledgeable)