Collection of existing applications to find a useful application for the FOAF ontology in combination with HCI and Multimedia

FOAF project

The *Friend of a Friend* (FOAF) project [1] is about capturing the social environment of people in a machine-readable way. The key relation of this ontology is foaf:knows, which connects people by their personal relationship with each other. This can be anything; knowing virtually, knowing well or superficially, knowing in a single direction (not reciprocally). With this relation a whole web of acquaintances is built, which can connect anybody with everybody, to a certain degree of removal. Other key concepts and relations of the FOAF vocabulary [2] describe people's interests, work affiliation, creations and how to be able to contact them. The RDF files containing FOAF descriptions of people are linked by a "seeAlso" pointer.

Applications

FOAFbot [3]
Plink [7]
Noadster [31]
w3photo [6]
Photo metadata: the co-depiction experiment [4]
SVG image annotation [11] and the Amaya browser [9]
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Instant Messenging (IRC, MSN, ICQ, ...) [25]

FOAFbot [3]
Purpose: inform about members
FOAFBot is an IRC (Internet Relay Chat [25]) bot that provides access to a knowledge base created by spidering FOAF files. It can sit on an IRC channel and provide basic informational help about the members of a community.
Drawbacks:
This only works in an IRC so far. You have to know the nickname of the person you are looking for, and the names of the properties you want to find, to be able to find information about sb. It is purely text based, and you cannot browse with it.
Opinion:
I don't find this very interesting, mainly because I don't use IRC.

Plink [7]
Purpose: an illustration of the information described with the FOAF ontology, nice

interface to the same thing as the FOAF explorer [8].
So far what you can do is upload your FOAF.rdf file, search for people and get information about their profile (basic is nickname, homepage, work homepage, blog), whom they know, whom they are known to, bio keywords, and what pictures they have online. Additional features are a little map showing where they are in the UK (only works for UK residents), and all their UK acquaintances listed, in the order of their geographical distance, with the location and the distance from x, and a link to news about their location.
Drawbacks:
objectively low usability, although it is the application with the relatively highest usability of all...
Opinion:
This is interesting because they explore the possibilities of which additional (useful or useless) information can be derived from basic FOAF information, e.g. the distance in km of the people that are known to you.

Noadster [31]
Purpose: provide a better interface to RDF encoded content.
Lloyd has coded a script to generate an interface that shows RDF relations in a clear and concise manner, which is a big improvement compared to the current Sesame DB interface. The main advantage is better structure of information and depiction of photos and videos and audio files. It is comparable to Plink, but Plink only works with FOAF RDF, whereas Noadster works with all RDF data.
Drawbacks:
Depends on the target group. For developers or ontology people this is already pretty good, they can clearly see the RDF relations etc. However, if other people should use it needs a big usability makeover (see Plink).
Opinion:
So far it is a visualization of RDF data with no further function. Possible additional functionalities could be editing of content, or adaptable content such as choosing which info to see (filter function), sorting the info on the page, hiding/ displaying the elements on the page (compare with Lynda's suggestion:
"Is there any way I can grab one of the entries in the (new) first column and move it? My preference is to have the image "http://xmlns.com/foaf/0.1/img" at the top. Then save this for all subsequent interactions with this and similar objects...
Perhaps easier - could I click on a particular field and just make it go away. (There would need to be some unobtrusive marker to get it back again. (A bit like opening and closing nested folders I guess.))"
and with Brusilovsky [32]:
"The adaptation effect in this reasonably rigid context is limited to three major adaptation technologies - adaptive content selection, adaptive navigation support, and adaptive presentation. When the user searches for relevant information, the system can adaptively select and prioritize the most relevant items. When the user navigates from one item to another, the system can manipulate the links (for example, hide, sort, annotate) to provide

adaptive navigation support. When the user gets to a particular page, the system can present its content adaptively. ”).

w3photo [6]
Purpose: provide a semantic photo history of the w3 conferences.
From the website: “A Semantic-Photo History combines the familiar digital photo album metaphor with semantic data and tools for richer and more meaningful organization and searches. Since the Semantic Web is still emerging, the term "semantic data" is defined as this project's best effort to incorporate a parse-able ontology expressed in and other Semantic Web languages. The proposed Semantic-Photo History of the Conferences would be the first visual archive of its type.”
All visitors of a W3 conference can contribute and annotate images. When annotating, there is the possibility to select different areas with a rectangular shape and annotate them individually. In the presentation the annotated areas are displayed below the image with their annotation description.
Drawbacks:
Low usability, no search function, no continuation (e.g. Additional info) once you know sb's name. “I'd be interested in getting automated access to the annotations on the pictures so that we could do a presentation of (collections) of the
photos in different ways. (Aktivespace, but then different.)”, says Lynda.
Opinion:
This is a smart way to create an archive: let everybody contribute and annotate. Besides sharing workload, it is a great way to stimulate a community feeling. Because only conference members can contribute images, it is an exclusive right to do so, and people can effectively share their pictures on a large scale, which is the point of taking pictures in the first place. It is also very handy to find names of people that you only know from sight, or whose name you have forgotten. Especially being able to annotate individual regions in a picture seems to be a very useful function.

Photo metadata: the co-depiction experiment [4]
Purpose: playful illustration of the degree of separation between two people via pictures
This is a variation on the concept that each person on the planet is just six handshakes removed from every other person; handshakes are replaced with being depicted in the same picture together. With the foaf:depicts relationship, a web between people who are in various pictures is created. The experiment has resulted in a tool by which you can find a path from one person to another via pictures. What you get is a row of pictures that are connected like domino pieces, e.g. a row that starts with Lynda and sb else in one picture, and via the sb else in other pictures with other people in them leads to a picture of sb (even more) famous, like the Dalai Lama.
Drawbacks:
Currently there is a working prototype [5], but it is low in usability and has only a very limited picture set to work with. However, this will change with the growing set of annotated pictures on the web, e.g. through the w3photo project.
Opinion:

The tool itself is fun, but the outcome (row of pictures from a start person to an end person) means just as little as being acquainted to everybody else on the planet to a 6th degree of separation. Perhaps it can be used to gauge the spread of annotated images on the web, and to test the correctness of the annotation. However, being able to specify all elements and people in a single picture with the foaf:depicts relation is really interesting, because it carries lots of historical information.

SVG image annotation [11] and the Amaya browser [9]
Purpose: select free-form regions from pictures (e.g. Silhouettes of people) in SVG and annotate them with RDF.
The Amaya browser is at the same time an editor, in which you can edit web documents directly. The idea is to be able to annotate different areas of a picture, like in the w3photo project, by creating a separate SVG file that overlays the figure in the image. This supports the FOAF aim of connecting people with people, by making it possible to annotate individuals in group pictures separately.
Drawbacks:
manual work
Opinion:
I think that this is really interesting. Just the possibility of being able to easily select free-forms instead of the usual squares (as for example in w3photo) makes this application stand out from other image annotation or editing programs. Most of the times, images contain shapes that require free-form selection. The most obvious use of this function is making precise selections of areas in pictures to annotate them. Perhaps it can also be useful for finding images on the basis of the shapes or outlines in them.

Ontology-based photo annotation [12]
Purpose: easier and more standardized annotation of photos, better search results.
This is a tool that allows the user to annotate photos based on domain-independent (describing photo and medium features) and domain-dependent ontologies. Annotation is guided by the structure of the ontologies.
Drawbacks:
There is no evidence that ontology-based search is better than keyword search.
Opinion:
I think this is really interesting, because it seems to be a solution to the problem of not knowing by which search terms to search for something. If users can also access ontologies, and if they know which ontology was used in a certain application, they can have a much better idea of how to formulate their search query.

CreativeCommons [13]
Purpose: enable creativity, interaction and innovation based on contributions from others.
CC provides a means for artists to convey to the world that they don't put a hard copyright on their productions. Instead they have the choice of different degrees of copyright, or none at all. This enlarges and promotes the commons that is accessible to

everyone.

Xforms [33]
Purpose: separate the purpose of the form from the presentation, device independence
Xforms is meant to replace today's XHTML form controls. Steven has a demo that shows how a repository of FOAF files can be accessed with an Xform, which also allows editing these files. The Xforms controls even allow adding instances of attributes of the same kind, for example if you describe which languages you speak, you can add a new instance of language when you have learned another language. --> it lets you edit not only the values of the attributes, but also in a limited way the attributes themselves. However, you can't add new kinds of attributes via this interface.
Drawbacks:
not yet widely supported.
Opinion:
This is pretty cool from a technical viewpoint, because it is an improvement to current XHTML form standards.

Aviri:
From a knowledge management perspective, the scope of FOAF lies in finding the right expert to help solve a specific problem in a wider context than your direct surroundings and the people you know. There is a commercial tool called Aviri which helps people find experts via their acquaintances. This tool includes a rating of the expert's professional quality.

What has caught on?
Approach: analyze the successful web projects/ standards/ applications, compare with photo- and foaf based applications/ research ideas, come up with sth the world needs...

RSS aggregators [21]
Purpose: have the latest news from your favourite sites gathered and presented to you.
RSS 1.0 stands for RDF Site Summary. It is an XML standard that describes items on webpages with title, link and description, initially intended for news sites. It makes sense for sites that are updated regularly to describe their news items in RSS. This is called an RSS feed. Users can subscribe to sites that have an RSS feed. Then an RSS aggregator recognizes items that have been added since the last time a user visited the webpage (--> news for that user!) , collects the title, link and description of each of these items and presents them to the user. This way the user is informed about updates on all his/her favourite webpages . A user can easily subscribe to sites with an RSS feed, for example via [24], and get all the updates in one location.
Characteristics:
be informed, be up-to-date, save time.
Opinion:
This is a really economic way to stay up to date on the incessant growth of information on the web. More application ideas are described in [35]. I find it quite interesting.

Blogging [22]
Purpose: express yourself, manifest yourself persistently.
This is a way for the individual to publish content on the web without having to have an own website. It is very easy to create a weblog, e.g. with Blogger. Com [23]. Whether other people find your weblog interesting becomes apparent by the traffic it gets.
Characteristics:
independent uncensored easy publishing.
Opinion:
I think you have to have a certain kind of personality to want to publish personal stuff on the web... or maybe it is just everybody's secret wish for 5 minutes of fame. Probably the most common use is to inform your friends about your life in a more persistent manner than email and easier than maintaining a personal homepage. One blog I found maintains only images and is really cool: it shows images that have been taken with mobile phones and sent directly to the website [34]. Here is a community that contributes pictures to share what they see with each other, like w3photo.

Instant Messenging (IRC, MSN, ICQ, ...) [25]
*Purpose: communicate in real time with people who are online at that moment.*
IRC is the most commonly used chat program which works on both Windows and Unix platforms. It connects all users that are connected to the program with each other via a large server network.
Characteristics:
communicate instantly, be in touch with a community.
Opinion:
This is extremely useful because it affords the same level of communication as a phone call does, but it happens on the screen, and the addressee can choose whether to react to the message or not.
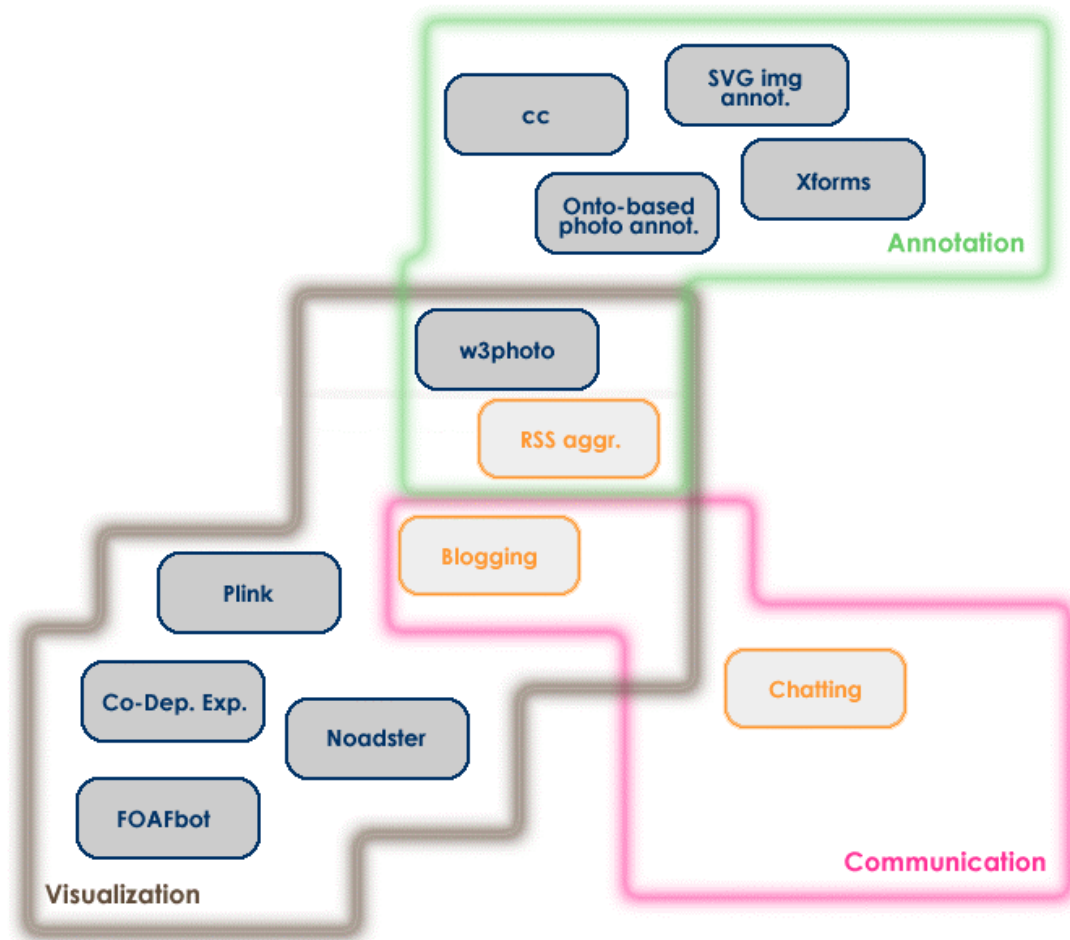
I consider the 3 areas Annotation, Visualization and Communication as the main emphasis of these applications.

Blogging is in communication, because it is interactive, people can give comments to blogs and this way communicate directly with the authors. It is also in visualization because it is a method for the user to visualize her thoughts.

RSS aggregators is in annotation, because the RSS feed relies on the annotation of the content in the RSS vocabulary, but it is also in visualization because the news can be incorporated in other websites to display the most recent news.

W3photo is part of annotation because you can annotate the pictures in it, but it combines the annotation with a visualization.

CreativeCommons is in annotation because it provides another attribute to annotate a document with.

Conclusion

Although we still haven't come up with a specific problem that can be solved with FOAF, we have a collection of ongoing research projects that are investigating the

possibilities of FOAF. The focus is on finding a way to visualize and use the network created by key FOAF relations, and to make explicit the connection between a person and their pictures on the web. This fits in with the INS2 perspective, which is optimally conveying information and knowledge to users via the internet using the richness of all available media. The INS2 project Noadster that Lloyd and Jacco are working on is mainly about visualizing the knowledge captured in the FOAF network.

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