

Caroline is at the front of the function room, behind a table, about to give her talk.

Many of the people who were on the walking tour of the wall poems are present, together with some other people who happened to be in the café when David, having made an arrangement with the café owner, announced that the event would take place at 2 o'clock and everyone was welcome to attend if they so chose, "free of any charge" as he put it sort of laughingly yet conveying that message. David had asked the café owner how much she charged for use of the function room, yet she had said that as they were eating there that there would be no extra charge, explaining that the function room was usually for parties and dinners in the evening and was free when food was supplied, so it worked out much the same.

The function room has a large display screen usually used for videos and the like for sing-alongs: the café owner has generously offered Caroline the use of her laptop computer and access to the internet, with the screen display of the laptop computer connected to the large display screen and Caroline has connected to the LocSARA webspace for illustrative images, one of which is now displayed. Caroline muses that this presentation might be a lot better than if she had been able to present a Quick Talk at the conference.

Caroline begins her talk.

"Good afternoon. One of the applications of localizable sentences that has been researched is to find out, through the language barrier, information about relatives and friends after a disaster. My talk today is not however about the analysis of how such conversations through the language barrier are structured, rather it is about the design of the glyphs that are used to represent the various sentences."

Caroline pauses and looks around the room.

"If I say something that you do not follow please interrupt and I will try to explain it differently."

Caroline continues.

"Firstly I need to say something about the use of glyphs for localizable sentences.

"In the early days of the research project the idea was that each localizable sentence would have a code point within the Universal Character Set together with a glyph. So a message could be displayed as symbols, ... and there could be an end user possibility of choosing automated localization of each localizable sentence from the code point into text.

"These days, each localizable sentence is expressed using an integral sign followed by a sequence of circled digit characters. Many localizable sentences do not have a glyph associated with them, but some do, ... some for historical reasons in that as they have been produced then we shall not discard nor deprecate them, and some of more recent design. So there are now three choices for display. Those choices are an integral sign followed by a sequence of circled digit characters, ... symbols, ... automated localization of each localizable sentence from the integral sign and circled digits into text.

"So as I said, this talk is about the design of the glyphs that are used to represent the various sentences about finding out, through the language barrier, information about

relatives and friends after a disaster. So I shall use the glyphs to describe the messages and not in this talk use the underlying encoding sequences of an integral sign and some circled digits.”

Caroline looks around the room, as if asking, without speaking, as to whether anyone wants to ask anything.

A pause. People are looking interested yet nobody speaks, so Caroline continues.

“Let us consider a scenario. A lady, Margaret Gattenford, and her niece, Anne Johnson, are travelling, by train, somewhere in Central Europe. There is heavy snow and an avalanche blocks the railway line and the train is diverted. Due to the snow they stay at a hotel in a small town where the train has stopped. However, due to continuing bad weather, communications are poor.

“Meanwhile, in England, Albert Johnson is worried about his sister and his niece. There is a television announcement that gives an email address for an Information Management Centre somewhere in Central Europe. The Information Management Centre is not necessarily in the same country as the hotel where Margaret Gattenford and her niece are staying. People at the Information Management Centre do not speak English and Albert Johnson does not speak their language.

“So Albert Johnson sends an email and it starts off with the following question.”

Is there any information about the following person please?

“The glyph designed for that is shown on the screen.” says Caroline pointing to the large screen.



“On the line after the encoded question, Albert Johnson states the name of his sister. That is done simply as ordinary text.”

Caroline continues. “This glyph is interesting and illustrates some features that are used throughout this collection of glyphs - and indeed are used in many other glyphs that each represent a localizable sentence.

“This glyph has an aspect ratio of 23 wide to 7 high. This is because when several glyphs are displayed in sequence there needs to be a gap between them, both horizontally along a line of text, and vertically between lines of text, ... so the overall box is 3 wide by 1 high, which is then 24 wide by 8 high. In fact in making this particular font each of the units in 23 wide by 7 high is in fact 256 font units wide by 256 font units high. However, for our purposes we may think of the glyph as being 23 units wide by 7 units high.

“The 23 units wide can be regarded as 7, then 1, then 7, then 1, then 7.

“In the leftmost position is a symbol to indicate that this glyph is one of a subset of sentences. There are other such symbols for other subsets of sentences. At the moment there are two other such symbols and I am hoping to show those later.

“The symbol at the right is a question mark.

“The symbol at the centre is a circle and is used in this situation to refer to a person where the gender of the person is not specifically implied in the sentence. When the person is known to be male the symbol is a square and when the person is known to be female the symbol is like a lozenge - based on the idea that the coat of arms of a lady are displayed on a lozenge - yet the symbol is in fact wider than is a lozenge.

“Now after the name of the person about whom the enquiry is being made, we may add some information about the person, encoded as localizable sentences.

“In this example we will add just one piece of information.”

The person is female.

“This is important, because in some countries people might not know that the name Margaret is a female name.

“Here is the glyph.”



“Perhaps I should mention that the glyphs are shown here in a large size so as to help with this talk. In normal use they are about the same height as the ordinary characters that have an ascender, such as lowercase b and lowercase h.

“Now the person may not be travelling alone and may be in a family group.

“If so, then every person in that group may each be introduced into the message using the following localizable sentence.”

Also, is there any information about the following person please?



“Then after that symbol is the name of the person to whom it refers, - the name expressed in plain text.

“As with the first person, information such as gender may be introduced.

“In addition, for each of the additional people, the relationship to the first person may be stated.

“For example,”

The person is the niece of the first person that was named.



“This is an interesting glyph.

“Please note that the left-side symbol is the same as for the previous symbols that have been shown.

“The centre symbol is a lozenge-like symbol, indicating female.

“The right-side symbol is used to indicate niece.

“There is a collection of symbols for expressing the relationship of the person currently the topic of the message to the first person that was named in the message. There is also a symbol for where the person is a friend. The design used for the right-side symbol for each of the various possible relationships - niece, brother, husband, uncle and so on - is the main part of this talk.”

Caroline pauses briefly.

“I now want to introduce the localizable sentences that are available to provide information in the message about the enquirer - in particular the relationship of the enquirer to the first person named in the message.

“For the scenario mentioned earlier, this is the sentence that is used.”

The enquirer is the brother of the first person that was named.



“It is interesting to compare and contrast the glyph with the previous glyph that we discussed. I will display them together on the screen.”



“Please note how the left-side symbol for describing the enquirer is different from the left-side symbol for describing the person enquired about.

“Please note that the enquirer is male, hence the square as the middle symbol.

“Please note how the right-side symbol is different. That symbol, when accompanying the square, indicates a brother.

“There are a lot of right-side symbols, each usable in either a male context or a female context.

“The various possible relationships are represented graphically in as structured a way as possible. There are three possible horizontal lines, the upper line is used for the older generation relative to the relationship, the middle line of the same generation relative to the relationship, the lower line for younger generation relative to the relationship.

“That is displayed in these two symbols, the sentence for brother uses a middle horizontal line, the sentence for niece uses a lower horizontal line.

“In addition, the simpler the right-side symbol, the closer the relationship.

“For example, the symbol for brother has a vertical line at the right, without that vertical line the symbol would refer to husband.

“Another example, the symbol for niece has a vertical line at the right, without that vertical line the symbol would refer to daughter.”

Caroline pauses. People are listening with interest. Caroline continues.

“So the designs needed to produce distinctive glyphs for the various possible family relationships - and for friend - all packed into the right-side symbol, assisted by the gender choice in the centre.

“Here are the results.

“For each glyph the relationship would replace the word placeholder in the following text so as to produce a localizable sentence. In each case the relationship is displayed below the glyph.”

The enquirer is the placeholder of the first person that was named.

“The upper horizontal line is used for the following relationships with respect to the person first enquired about.”



father



grandfather



great grandfather



uncle



great uncle



great great uncle



cousin, male

“The middle horizontal line is used for the following relationships with respect to the person first enquired about.”



husband



brother

“The lower horizontal line is used for the following relationships with respect to the person first enquired about.”



son



grandson



great grandson



nephew



great nephew



great great nephew

“No horizontal line is used for the following relationship with respect to the person first enquired about.”



friend, male

“Thus the glyph that refers to a friend is not contiguously linked.”

Caroline pauses, then continues.

“Now there are female equivalents for each of these, but I will not list them here - what I would like to draw to your attention is the way that a short vertical line at the right is used to produce a design for a glyph referring to the enquirer being an uncle based upon the design of the glyph referring to the enquirer being the father and that the same technique of a short vertical line to the right - though placed lower down - is used to produce a design for a glyph referring to the enquirer being a nephew based upon the design of the glyph referring to the enquirer being a son.

“Please notice also how a short horizontal line at the left - that is, at the left of the right-side symbol - is used to denote grand as in grandfather and grandson or great as in great uncle or great nephew. Then please notice how a shorter vertical line is used to prefix great upon to each of those relationships.

“So the information is packed into the designs in a consistent manner.

“Yet please consider the glyph for cousin. A cousin is often about the same age as the person of whom he or she is the cousin, though not necessarily.

“So it could reasonably be argued that the glyph referring to the relationship being a cousin should be derived from a glyph with a horizontal main line - perhaps similar to the glyph referring to a brother yet with the right side vertical going down rather than up. Yet the glyph referring to cousin is derived from the glyph referring to uncle, so that does derive more directly from the family tree of the relationships.

“Yet even with this fairly large collection of glyphs some relationships are not included at the present time - for example in-laws, second cousins and so on. It is a matter of balance - more sentences gives greater expressiveness possibilities, yet needs more translations to set up the system, for if the system is to be used successfully in practice then every localizable sentence in the collection needs to have a previously produced localization into each supported target language.”

Caroline pauses, so as to separate one topic of her talk from another topic of her talk.

“I mentioned that three left-side symbols are used in this particular collection of symbols.

“The third left-side symbol is used so as to be able to provide an answer to the enquiry.

“At present only one glyph has been specified in relation to the third left-side symbol.”



The person is safe.

“Please note how the left-side symbol is similar to, yet different from, the other two left-side symbols. It is upside-down in relation to the first symbol as it is a reply.”

Caroline pauses.

“There is just one more item that I would like to mention before I finish the talk.

“An interesting situation occurred during the development of the symbols.

“It was realized that some pairs of symbols that had been designed could be confused, both generally and particularly if they were drawn by hand in a hurry.

“For example, let us consider please the glyph for the sentence where the enquirer is the husband of the first person that was named and let us compare and contrast the design with the glyph for the sentence where the enquirer is the son of the first person that was named.

“The original designs are shown at the left and the later designs are shown at the right.”

The enquirer is the husband of the first person that was named.



Before

After



Before

After

The enquirer is the son of the first person that was named.

“Only the glyph where the enquirer is the husband has been changed.

“Yet that change - the addition of the extra piece of vertical line at the left - was also applied to distinguish between the glyph designs relating to wife and to daughter as well. Also to distinguish between the glyph designs relating to brother and to nephew and to distinguish between the glyph designs relating to sister and to niece.”

Caroline stops talking and drinks from a glass of water. She smiles and looks to David as his cue.

“Well that is very interesting. Thank you Caroline.”

David leads off with applause and others join in.

David turns to Caroline.

“Will you take a few questions?”

“Yes.”

A lady asks “What about in-laws? Are they included?”

“Not at present.” replies Caroline.

“Could they be? How would that be done?”

“Well, I suppose so, it would be a matter of packing the information into the glyph while keeping the glyphs clearly distinguishable each from the others.”

A pause.

A man in the audience asks “Could that be done by adding a hollow square to a copy of the glyph of which it is the in-law version, say three by three on the grid, located at the very right of the glyph in the otherwise unused corner?”

“Er possibly,” replies Caroline “That could work for father-in-law and son-in-law, but there would not be enough space for brother-in-law so as to keep the square non-contiguous.”

A lady asks “The small hollow square shape might be a bit heavy - would it be better to stay with the three by three grid but only to use five pixels for ink rather than eight so as to use a capital L shape for son-in-law and a capital gamma shape for father-in-law and for brother-in-law?”

“Well” replies Caroline rather cautiously.

David says “Could the horizontal line be moved up one grid position, just for brother-in-law, well for sister-in-law as well, but it would be the same glyph over at the right just the lozenge in the middle instead of a square..”

“Hmm maybe - we will need to look at that - it is an interesting suggestion.”

There is a pause.

David speaks “Thank you Caroline, that is excellent.”

Caroline smiles at David, acknowledging his thanks.

There is applause from the audience.