Edith and John have just entered Edith's office.

"Sorry to get you away from your break John, particularly as you were showing Edward around on his first day here, but something has come up."

"Oh."

"I have had a telephone call from a university, not the one that Edward was at, and a lecturer has seen Edward's article and become interested in our project and asks if we can take a sandwich student for six months. The thing is, they are really having problems finding placements for people."

"Well, when would the placement start."

"Well they should have started this week, that is why I got you out of your tea break. We need to make a decision one way or the other promptly."

"Well, what do we know about the student?"

"Male, second year undergraduate. The thing is I am in a difficult spot. It would seem wrong to invite him out here for an interview unless there is a real chance of having him here for the six months, yet I am reluctant to appoint someone without having met them first, even if it is only for six months. Also, if we do have him, could you find him a project such that he could write a report for his course?"

There is a pause. John is thinking.

"There is what I have called project 573."

"573 .... where does the number come from, surely there are not 572 other projects?" smiles Edith.

"No, 576 is a number than comes out of the mathematics. But thinking about it I changed the name to project 573 as that enables me to have a better logo design for the project."

"Interesting."

"Some time ago I was talking with a nurse about our project, it was at a social gathering, not an official meeting or anything. Well, I explained about the idea of throwing messages to someone nearby using a mobile phone and there being automated localization and I asked her if localizable sentences could be useful for her in her job. Well she was quite enthusiastic about the idea. She explained that often people bring someone with them who can translate, but that at times she has had to use mime to express the question 'Have you vomited?'"

"Yes."

"I got to thinking afterwards that that was a solution at the time but that some other questions could not be mimed. So I thought that having a special collection of localizable sentences each with a three-digit code number just for first contact medical communication through the language barrier, with a different base character for them, might be a good idea. That could potentially be a thousand sentences, but then I

remembered that for a couple of years I had a credit card where there were two eights in succession within one of the four digit blocks. Practically every time I tried to give the number over the phone for a telephone order there was confusion, as in was that 'eight eight' or was I just repeating the eight as I thought that they had not heard it. When the card was renewed there was no double digit and I was glad about that!"

Edith smiles.

John continues.

"I thought that apart from the electronic version that there could possibly be a pen and paper version using code books, one for each language, they would have the same data as the electronic version, and then I thought that maybe sometimes there could be a conversation over a telephone voice link where people would say the numbers."

"Yes."

"I remembered from learning languages in my general education that they always get round to doing numbers, but that they have never, in my very limited experience, they have never included zero."

"A bit like Roman numerals."

"Yes exactly. So I thought that not using zero would be a good idea. So I thought that there would be nine choices for the first digit, eight choices for the second digit to avoid repeating the first digit and eight choices for the third digit so as to avoid repeating the second digit. That is five hundred and seventy-six codes. I also think that it might be best to avoid using any digit twice at all, so that would be five hundred and four codes, but that would then make it project 504 and there would be a zero in the title. So I thought to have it as project 576 and yet only use the five hundred and four codes that do not have a repeated digit, keeping the other seventy-two codes in reserve, but as I mentioned I have since changed it to project 573."

"Ah."

"I then thought that the sentence with the code 573 could be a reference to suggesting using the system, so that if someone says 5 7 3 that people might know that a suggestion to use the system is being made. The thing is, suppose that someone knows a bit of French but no English. If he or she were in England then he or she might say cinq sept trois and the meaning could be picked up by someone who speaks English but knows a little French."

"Yes."

"But it is all speculation and there would need to be discussion with medical professionals over which sentences they would want and whether that number of sentences would be enough to cover lots of situations, including some administrative questions such as asking age and date of birth and so on. One or more of the sentences could be reserved for possible later expansion, as the start sequence of, say, five digit codes, and so on. I thought of using 123 as the start of longer codes for medical administration sentences and 987 as the start of longer codes for medical sentences as such."

"It seems that it could be a big project, yet possibly very useful, ... though not necessarily."

"Indeed. So if the student does come for six months he could do a feasibility study and look into it all and maybe produce a basic system as a demonstration of what could be possible. Or maybe find some reason why the idea would not be of use in practice."

"Yes, it is a project that could give him something useful to do for six months, he gets the experience and writes it up for us. Yes, good."

"Do you know what subject he is studying? Is the project relevant."

"That's a good point. .... I was concentrating on the idea of having a sandwich student, not on the idea for the project!" chuckles Edith.

"Well, I suppose that he could be doing physics, computer science or business administration, or maybe a language."

"Well, I'll ask the lecturer and if she is happy with that project for that student then fine, and if not I'll get details of what sort of project is needed and we'll try to think of something."

"Are you expected to pay him?"

"Well, expected or not, I shall pay him and he can have employed staff status while he is here. If they say that I cannot pay him then I will argue about that at the time."

"Excellent."

"You mentioned a logo."

"Well I thought that there could be three rows of spots, or three columns of spots, or maybe three diagonals of spots, or maybe some other design that comes to mind later, arranged in some way. I thought that five, seven and three, all being odd numbers could perhaps give a better effect."

"Whatever, as long as there is a distinctive logo."

"Yes. I am thinking that such a logo could be used on signs to indicate 'You may use system 573 here' in a language-neutral way. Also, on hardcopy code books and I thought there could be a credit card size version of each code book that could be opened out into a single sheet, so people could carry it in a wallet and have it with them if they need to use it. I thought that sometimes that the logo could have a thin line rounded corner landscape orientation rectangle around it in some situations. Though maybe solid spots might be too heavy."

"That sounds good. You, or maybe the sandwich student, or maybe the two of you together can decide on the details of the logo later. Whatever you do decide, let me have a look before you make a final decision would you please."

"Yes, certainly."