ELSNET IN WUNDERLAND

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ABSTRACT

The paper discusses possible routes for ELSNET into Wunderland. The first part is sceptical, perhaps overly so, the second part is optimistic, and overly so. We shall not get there (into Wunderland) by accident or sheer luck alone since we are considering it as a goal, but we also need a tree to fall into, or something like that.

1. THE DREAM

"ELSNET in Wunderland" is a dreamy title -what will it take to make the dream reality, if at all possible? What is the dream? It is something like the following: that European research and industry shall have a common permanent forum for displaying the capabilities of state-of-the-art speech and language technologies of all kinds, allowing interested parties to try them out, compare them, negotiate technology transfer, or partnerships, or purchase some technology or related service, such as consultancy. "Of all kinds" means, or seems to mean (see later), speech and language systems, components, design and development tools, toolkits, development resources, benchmarks etc. The permanent forum is probably supposed to be a single virtual place, which nowadays would seem to have to be the World Wide Web.

2. THE BATTLE FOR ATTENTION

Being in one place seems to require technological standardisation or guidelines to some extent: on formats, lower bounds of what is demonstrated, perhaps upper bounds of demonstrations, documentation, layout etc. Complying with guidelines means going out of one's way, more or less, to comply. Complying, therefore, takes motivation: there must be a greater benefit to be reaped from complying, otherwise why do it? In addition, all or most European research and development projects in the speech and language area already have their own websites. Websites take effort to develop and, not least, maintain, which is witnessed by the many websites which were conceived and initially developed with much enthusiasm but whose last update can now be seen to be half a year ago or more. So, a fortiori, developing two websites at the same time would appear unrealistic in practical terms. And, again, where would the motivation come from? Finally, the (well-motivated) call, both by the EC's funding agencies and nationally, for much more active dissemination of research results has led to the establishment, in the area we dealing with, of European supporting infrastructures such as Elra, Linglink, Euromap and, most likely, other activities which the present author is not aware of yet. This means that the field is crowded already from organisations which demand the attention of researchers and industry, promise to efficiently disseminate their results, and spend their time with the filling in of questionnaires, the writing of summaries, or the correction of infelicitous summaries done by those organisations themselves etc. If the participants in some ongoing project do not believe that any of these organisations are able to disseminate the project results properly, the participants have to do it themselves, which they are requested to do by their contract anyway. A new, permanent demonstrator forum thus will have to join the crowd, trying to capture the remaining spare attention, if any, of project partners, researchers and industry. This means shouting out loud, especially since none of the players are likely to have been forced through their contracts to collaborate with the forum organisation, i.e. ELSNET. So, motivation is needed yet again.

3. MOTIVATION

Motivation might be positively affected by an already existing critical mass. So, had ELSNET's Wunderland already been in existence, attracting world-wide interest through its sheer size, quality, innovativeness, and the huge diversity of its exhibits, as is the case for large exhibitions such as the CEBIT in Hanover, that attractiveness just might be sufficient for potential newcomers. Assuming that this would be the case, the question becomes how to achieve critical mass from scratch. Needless to say, that requires motivation by something else than critical mass - ignoring the possibility that the mere hope of achieving critical mass eventually would provide sufficient motivation.

Perhaps the simplest solution would be to be able to say: "Don't worry, we will do everything necessary for you, and for free"; or, better still: "We will pay your full costs in developing a handsome demonstrator of your system, component, annotator's workbench etc." But ELSNET cannot afford that by a long way. Even sup-

posing that everybody would pay for themselves, and that "everybody" amounted to the coveted critical mass, ELSNET would be hard pressed to "just" maintain the resulting permanent exhibition. Maintenance means personpower means considerable expenses. So we need more funding for ELSNET - but, if possible at all, that would be likely to happen only after having achieved, or gotten close to achieving, critical mass for the permanent Wunderland exhibition.

4. DEMOTIVATION

Well, it is easy to become demotivated about the whole demonstrator exhibition idea from the above. In any case, it seems clear that the initiative will have to be carefully considered and planned with a view to breaking the barriers of not-sufficiently-motivated stakeholders, lack of financial resources, and lack of critical mass. The right attitude towards the task is not likely to be this:

"Right, then, let us just struggle forward in the expectation that we shall manage to exhibit one or two, or maybe even a few, speech and language technologies during the lifetime of ELSNET. Some of our friends might want to help (just like parents do when their children at school become tasked with selling lottery tickets in town)". If the aim is success, this will hardly do, except in an exploratory first phase. Critical mass must be the aim and nobody can tell if it can be reached under the present circumstances.

5. SEED MONEY, MOTIVATION -AGAIN

Never underestimate ELSNET, though! The network has had some remarkable successes in the past by taking the right initiatives early and making them grow into something bigger through seed money and lots of free labour by independently motivated actors. This applies to ELSNET's initiative on research and development resources, which led to Elra, ELSNET's initiative on Central and Eastern Europe, which led to Copernicus, ELSNET's initiatives in training, which led to Socrates, ELSNET's initiatives in evaluation of language and speech systems and components, which highlighted the need for much more activity in Europe in this field - activity which now seems to be forthcoming in the 5th Framework Programme - and more initiatives are cooking. In developing and testing the Wunderland idea, ELSNET will probably have to rely on the same factors which were brought to good use in the past: early action, seed money and independently motivated actors. Do these three factors exist for that purpose, and how might they bring about a new success?

Would the Wunderland action be early? The answer seems to be a cautious "yes". The caution is there not as much because the Americans are already in Wunderland - they aren't. But Europe has Elra and may soon have more institutions independently of what ELSNET does - ELSNET is not a Commission planning or consulting entity. ELSNET's strategy should be one of close collaboration with all existing and forthcoming initiatives of sufficient quality for collaboration to be worthwhile. For instance, if Elra needs a shopping window, let the permanent exhibition forum be that window. If the EC needs a shopping window in FP5, let the permanent exhibition forum be that window. That might provide additional resources and generally be a good tree to pop into. But don't count on it.

Is there seed money in ELSNET? Some, presumably, even if Wunderland maintenance could, and probably should, become a significant cost.

Even more importantly, are there independently motivated actors out there who would do some of the work for free? So far during the lifetime of ELSNET, there have been such actors. But this time? So far, ELSNET's use of seed money has been successful and motivating for one and the same reason: their use led to larger projects funded from elsewhere. So it seems very important that this should be possible again this time. In addition, there already are several European projects which develop very advanced Web-based systems that will incorporate speech and language technologies. That is, many of those projects are not speech and language projects as such but aim to develop larger Web environments whose functionality will include technologies such as spoken language human-human co-presence on the Web, speech-based Web search, speech-to-text and text-to-speech, speech and gesture, shallow translation, speaking avatars and embodied speaking systems, and summarisation of text and multimedia information. Many more such projects can be expected under Framework 5. A recent inquiry among the thirteen i3 projects in Intelligent Information Interfaces for the broad population (see http://www.i3net. org) thus demonstrated that more than half of these projects include advanced speech and language technology sub-projects. If ways could be found to link with projects such as these, brokering research collaboration between the projects and workers in speech and language, the Wunderland might get a head start - not necessarily by being established in strength right away, but through becoming a milestone in the projects' research progress. It follows that the Wunderland would be less of an independent speech and language country and more of a virtual information space, but some might view this as a distinct advantage because that is where the technology is going anyway.

So, link with projects whether these are ongoing, planned, or just possible outcomes of exploratory investigations into the Wunder Land.

6. PHASES

The available seed money could be used both for linking with ongoing projects - enabling them to comply with the exhibition guidelines - and for launching ELSNET-specific exploratory initiatives. In a first phase, one might do (implement, import, localise etc.) a couple of relatively easy exploratory cases, such as grammatical analysis for educational purposes, shallow translation and a spoken language demonstrator. There is reason to believe that many such systems already exist out there which researchers or industry would be happy to bring on show. The first phase is perhaps not likely to motivate industry to pay (much) for the opportunity, but that could come later. The cases themselves do not matter much as long as they are clearly feasible, make some valid points each, and can be realised rather quickly. Instead, this phase should focus on developing the technical and usability guidelines to be followed by would-be Wunderland immigrants, documentation for newcomers and intellectual property rights. Meanwhile, the potential for linking with projects and broader FP5 initiatives should be investigated in detail. Supposing that these activities work out, then:

In a second phase, and armed with technical and usability guidelines, documentation for newcomers and intellectual property rights know-how, a real call for demonstrator technologies could go out, asking for every imaginable technology and specifying the lower bounds for inclusion of demonstrators. Some kind of board could perform the necessary evaluations. ELSNET might support adaptation to its guidelines and should strive to launch as many demonstrators as possible. By the time this happens, it is conceivable or even likely that there will exist a considerable number of European projects which are already in the process of developing speech and language technologies for the Web, either as stand-alone technologies or integrated into larger Web-based systems.

If ELSNET, by credibly launching work on a sufficient number of demonstrators simultaneously, can promise projects a public relations effect which is much larger than what they are likely to achieve by themselves, and can deliver a worthwhile collaborative/competitive showcase environment, then Wunderland might come true by the year 2000. That's not a bad time to achieve critical mass.