The Structure of the Site and Site Navigation

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Site organization

The site has a complex structure that can be described by a graph composed of three identical subgraphs connected "in parallel". These subgraphs correspond to the three languages in which the site is translated. The nodes in the graph are represented by files, and the edges of the graph are represented by links between files. The links being bi-directional, the graph is a bidirectional graph.

At every level (i.e., from every node) of a subgraph, there are edges to the corresponding nodes of the other two subgraphs. These are the "parallel" connections. Each of the three main subgraphs has an "underlying tree" (the mathematical *spanning tree* of the graph). In fact, each of the subgraphs may have more that a single spanning tree. These trees constitute a "logical development of ideas," and may be considered a preferable way of reading the site. The nodes in a spanning tree, interpreted as the titles of the corresponding pages, can be seen as a possible table of contents of the site, in a given language. Many of the nodes in the graphs are connected with "bridges", that is edges (links) going from one level of the spanning tree to another node from another layer. In this way, the spanning trees become full graphs. The overall structure of the site is sketched in Fig. 1.
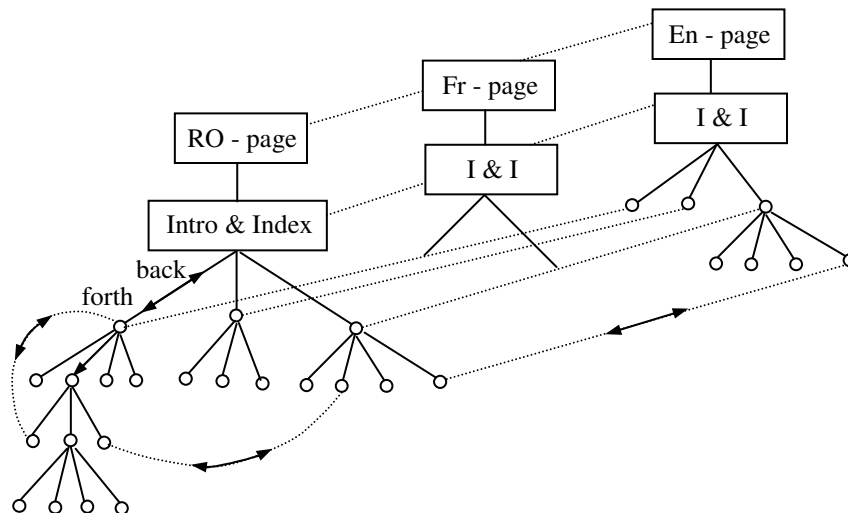

Fig. 1. Underlying tree with connections (edges) in the overall graph

Beyond the introductory pages, there is no specific order of the visiting of the pages of the site. There are numerous paths the users can take to arrive at a specified file.

The files composing the site fall into several categories:

- Documents, either .html or .pdf, describing the content of the other types of files and explaining the site content, the site logic, and the use of various files in the site;
- Speech files, in various formats, like .wav, .ogg;
- Annotation files, mainly Praat files;
- Executable files, that represent tools built by the authors of the site with the intent of providing improved tools for speech analysis.

As a rule, every file that is not a document is accompanied by at least one document-type file; the user sees first the document with the general description of the sound file or files from a given class, then from links in the document can open or save the sound files, or use available tools to analyze sound files (indirect access to the sound files).

From the point of view of the user, the first page viewed is that of documentation. Form that page, further documentation pages can be opened, data (speech files) can be accessed; moreover tools can be opened and used.
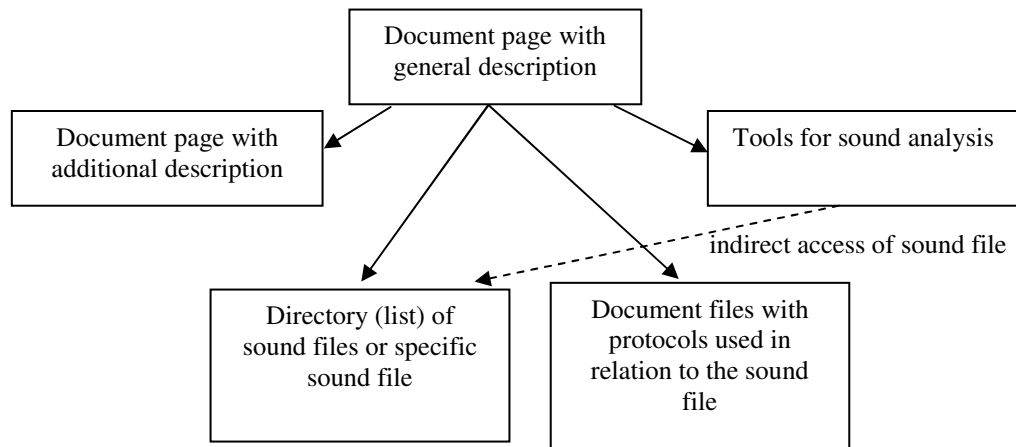

Fig. 2. "Local" organization around sound files or lists (directories) of sound files

Instructions on the site navigation

First-time users are advised to read the introductory pages and all the instruction pages. Depending on their particular interest, sections of the site can be more intensely accessed by some users; however, we can not satisfy all needs and the organization of the site may be found "logical" by some users, but clumsy by others. To satisfy as many needs as possible, a large number of bridges have been added to the original structure of the site. However, adding to many bridges makes the site too difficult to operate and maintain; bridges make loops appear in the site structure (graph) and loops can be

confusing for some users. Therefore, a balance has been observed between the easiness of constructing a specific path in the graph by a given user and the complexity of the graph. In the future, detailed structures of "recommended spanning trees" will be provided on the site, the orient the users from specified categories of interests.

Site access and security

The site has a multilayer structure from the point of view of access and security. The first layer is a "free" layer that is visible to any user of the WEB. It includes all the basic elements of the archive, the almost full documentation available, and examples of almost all the speech file categories: vowels, syllables, words, sentences with various intonations, sentences with various emotions, dialectal variants, pathological speech files etc. This level is devoted to teaching and learning purposes. The only security applied to this layer is that of the server.

The second layer, which is not yet implemented, will be accessible to "regular users". The regular users will get full access to the archive or to the parts of the archive that interest them, after a written agreement is obtained between the users and the site managers/creators. The agreement will basically consist in conditions of use, obligations of the users and the time-frame of use. Once the agreement is reached, the users get specific passwords to access the archive. The regular users can not modify the site content, except adding sound and documentation files "for reviewing." Once a period of time has passed and the files have been reviewed by the research community, the files will be loaded in the archive and become "official" archive files.

The third layer of access and security is for the site administrators and the board of administration; that layer is not detailed here.