Knowledge base

I have been working on the XML encoding of the Vindolanda Tablets trying to update the website " Vindolanda Tablets Online " with the new tablets from the third book on The Vindolanda Writting Tablets, whilst adding extended functionality to the website. This includes work with contextual encoding and creating XML through PHP scripting.

This work has enabled me to create a new website for the Vindolanda Tablets , which is not finished yet. It uses the contextual encoding of the Vindolanda Tablets (fig. 1) to pull out the indexed words and allows the user to search through them using Ajax LiveSearch technology (fig. 2).

WORD INDEX

```
<w lemma="idem" n="1" type="eodem">eodem</w>
```

CALENDER INDEX

```
<date calendar="Iunius" n="1" type="Iunius_xi_kalendas" value="xi kalendas">
Iunius xi kalendas </date>
```

Fig. 1 Contextual Encoding

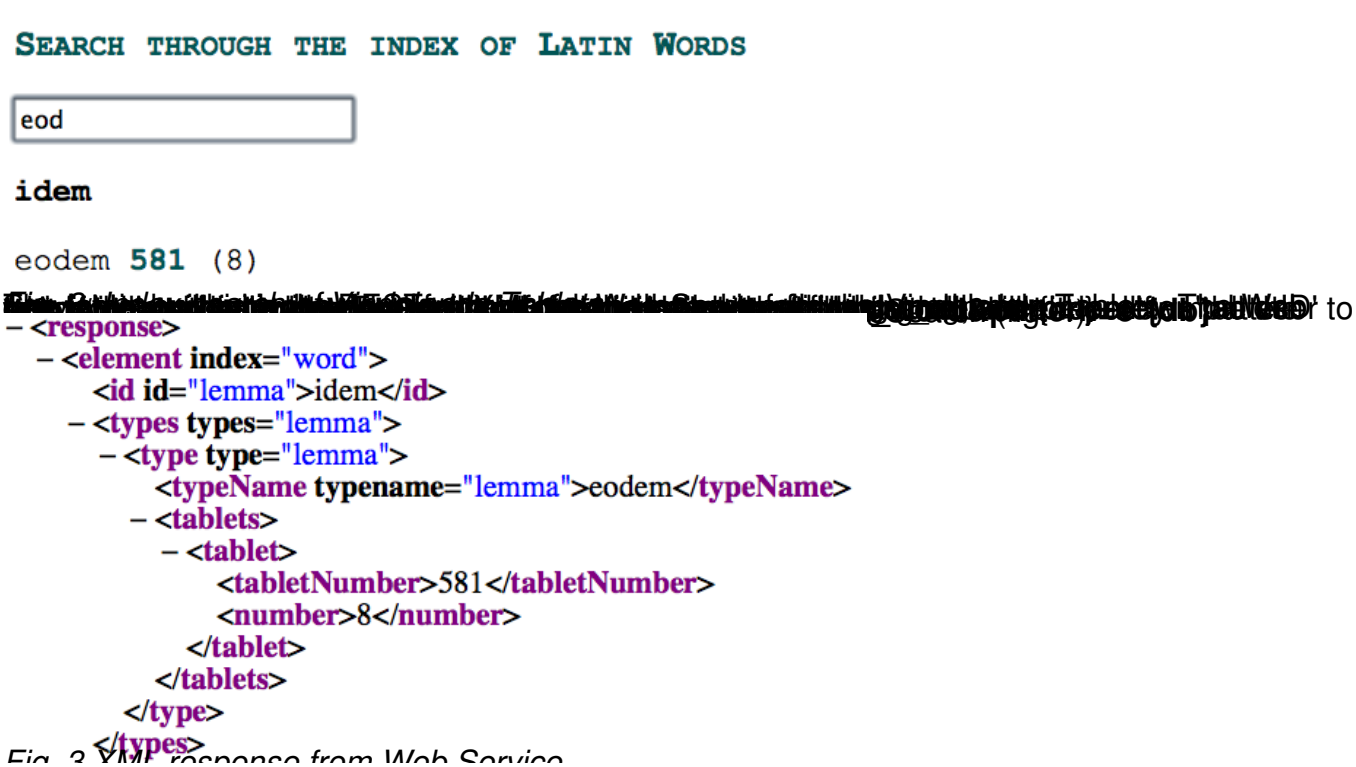

Fig. 3 XML response from Web Service

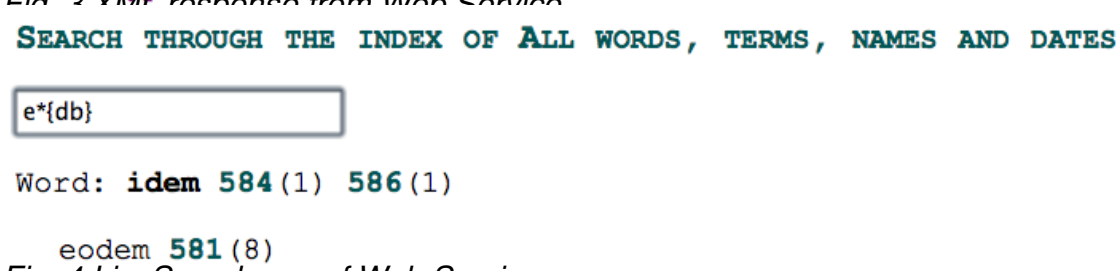

Fig. 4 LiveSearch use of Web Service

Interpretation Support System

Recently, I have built a prototype for the Interpretation Support System (ISS), which will form the basis of my thesis "Building an Interpretation Support System to aid the reading of Ancient Documents".

The ISS is build on an idea of a network of minor interpretations (percepts) such as a low level percept : “these three line fragments are an incised stroke” or a higher level percept: “these five letters can make up the word 'legio’”

The aim is that the expert reading an ancient document should be able to use the ISS for the things which humans find difficult, which are things like:

- Remembering complicated reasoning
- Searching huge datasets
- Accessing other experts knowledge
- Enable cooperation between experts on a single document

The ISS will guide the expert through the steps of identifying and committing to possible:

- Elements (Characters, Interpuncts, Indents and Spaces)
- Characters (a, b or c)
- Words (bovem or quem)
- Phrases, sentences and paragraphs

The process of identifying and committing to these elements, characters and words will be evidence based in the sense that the character 'h' (fig. 5) may have several pieces of evidence for or against it. It is however always up to the expert to decide which evidence to listen to.

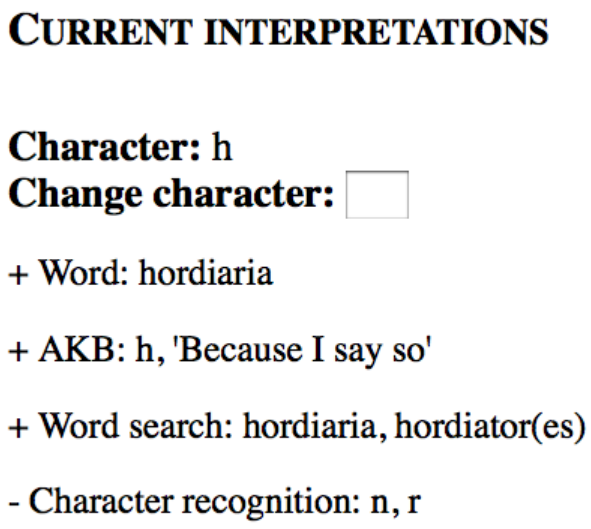

Fig. 5 Evidence for the interpretation of character 'h'

Web Services

Finally, the Vindolanda Web Service will be used as a knowledge base of words, which can be evidence for and against certain words or characters (fig. 6).

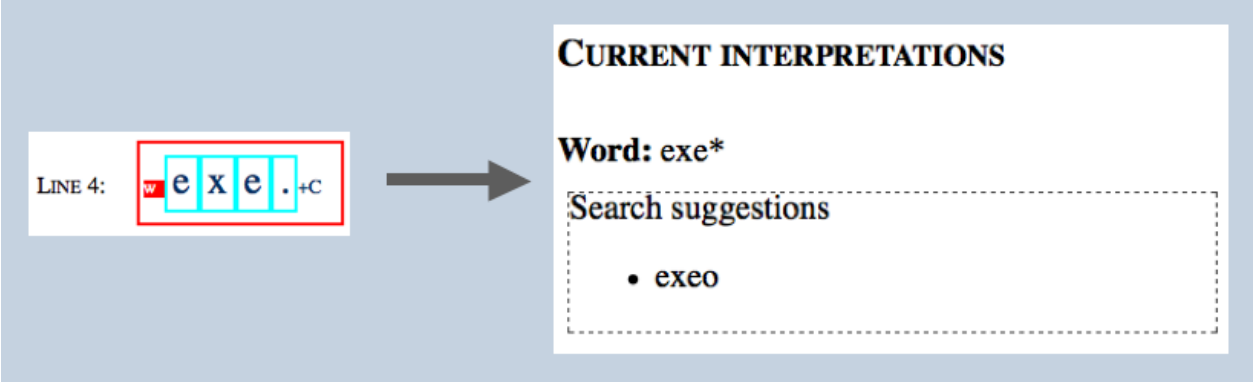

Fig. 6 ISS use of the Web Service

The plan is that the Vindolanda Web service should not be the only web service used in this way. If an expert was reading a Greek text the Vindolanda Tablets would be pretty useless as a knowledge base. Therefore, we are hoping that it will be possible to use other resources (e.g. Lexicon of Greek Personal Names). A part of the plan is also that each tablet read through the system can be reused as a knowledge base for future tablet readings.