

# Using Papyrus with L<sup>A</sup>T<sub>E</sub>X

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L<sup>A</sup>T<sub>E</sub>X has a keyword-based system for handling references. The master text file has commands such as `\cite{keyword}` and each keyword appears in a companion bibliography file as:

```
\bibitem{keyword} Soap, J., J. Unlikely....
```

Each `\cite{keyword1,keyword2}` command generates a note in another companion file (`.aux`) when the document is formatted. This example will give:

```
\citation{keyword1,keyword2}
```

This file is then processed by another program which generates a correctly ordered bibliography file in the form above. L<sup>A</sup>T<sub>E</sub>X's internal `\cite` mechanism ensures that the references are numbered correctly. (In cases where there is a group of references, with consecutive numbers `cite.sty` converts this into a range  $n_1-n_n$ )

To use this approach with Papyrus the keywords become the reference numbers. A simple `sed` or `MicroEMACS` script can insert the appropriate delimiters allowing text extract to be performed on the `.aux` file. This is easily wrapped into a DOS batch file. I use:

```
sed -e"s/^\(\.\+\)\$/\(\.\+\)\$/" c1.aux > c1.bib
```

It only remains for Papyrus to generate the bibliography file correctly. Here a hack is needed, since Papyrus' knows that curly brackets must be escaped to get them into L<sup>A</sup>T<sub>E</sub>X text, and will only give `\bibitem{\xxx\}`. A macro solves the problem; the format is written with the `Indentation/Numbering` option set to produce `Ref#`, formatted as type 5, `Other`, the text before the number is `\expandafter\bibitem\num` and `\endnum` appears after it. This will give references beginning with:

```
\expandafter\bibitem\num123\endnum
```

and the definition of the macro `\num` is inserted at the top of the bibliography (which has to be edited anyway, to remove a Papyrus-generated header giving the parameters used in generating the bibliography).

```
\def\num#1\endnum{ {#1} }
```

This method is valuable because it avoids having a "master" file with raw reference numbers and a "production" file with numbers in citation order. The temptation to tweak the "production" version, risking disaster when major changes are needed and a return to the "master" version is required, is extreme! It is also useful when a document is composed of several files, all of which must be extracted; the modified `.aux` files are concatenated with `DOS copy` and the concatenation extracted. This is easy to automate with batch files.