

Re: Lisp's QUOTE and Mathematica's "Hold"

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- *From:* Peter Seibel <peter@xxxxxxxxxxxxxxxxx>
 - *Date:* Sun, 21 Aug 2005 22:52:05 GMT
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Jon Harrop <usenet@xxxxxxxxxxxxxxxxx> writes:

> Richard Fateman wrote:

>> Mathematica doesn't need or use macros, and neither does a computer
>> algebra system written in Lisp, simulating Mathematica.
>
> Not macros, functions mapping ASTs to ASTs. They are the core of
> Mathematica and a language that provided this functionality clearly
> and efficiently would be of great use in this kind of work.

Then you should check out Lisp. Macros are interesting in this context insofar as they are an *example* of a part of Lisp that depends on the ability to write code in Lisp that does AST→AST transformations.[1]

But ultimately macros are for producing Lisp code. If you just want to manipulate arbitrary ASTs and/or if you ultimately want to produce some other form of output (such as code in another language or machine code or typeset math) then these Lisp features are what you should be looking at:

- The built-in symbol data type and packages.
- The reader.
- The printer.
- DESTRUCTURING-BIND.
- The many built-in functions for manipulating trees built out of cons cells.

and ... wait for it ...

– QUOTE.

–Peter

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Re: Lisp's QUOTE and Mathematica's "Hold"

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- **Follow-Ups:**
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- **References:**
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