

Lisp Machines and the Analysis of Their High-Level Language Computer Architecture

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Overview

- 1 History of Lisp machines
- 2 How Lisp works
- 3 Problems in Execution
- 4 Example processor
- 5 Legacy of Lisp machines

Early history of Lisp

- Lambda Calculus introduced in 1930s by Alonzo Church
- Fortran in 1957
- No programming languages optimized for artificial intelligence
- Lisp designed in 1958 by John McCarthy
- Lisp code implemented on IBM 170 months after

Lisp machines

- Lisp machines released in mid-1970s, became popular in 1980s
- Manufactured by Symbolics, Lisp Machines, Inc., Xerox, TI
- Offered GUIs, advanced programmability, flexibility
- Noncompetitive hardware
- Eventually became outperformed by general-purpose computers
- Vendors went bankrupt in 1990s



Paragraphs of Text

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Blocks of Highlighted Text

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Block 2

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Multiple Columns

Heading

- 1 Statement
- 2 Explanation
- 3 Example

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Table

| Treatments | Response 1 | Response 2 |
|-------------------|-------------------|-------------------|
| Treatment 1 | 0.0003262 | 0.562 |
| Treatment 2 | 0.0015681 | 0.910 |
| Treatment 3 | 0.0009271 | 0.296 |

Table: Table caption

Theorem

Theorem (Mass–energy equivalence)

$$E = mc^2$$

Example (Theorem Slide Code)

```
\begin{frame}  
\frametitle{Theorem}  
\begin{theorem}[Mass--energy equivalence]  
$E = mc^2$  
\end{theorem}  
\end{frame}
```

Figure

Uncomment the code on this slide to include your own image from the same directory as the template .TeX file.

Citation

An example of the `\cite` command to cite within the presentation:

This statement requires citation [Smith, 2012].

References



John Smith (2012)

Title of the publication

Journal Name 12(3), 45 – 678.

The End