

Introduction to Maplesoft

Perspectives on Open Source

Tom Lee Ph.D.
Chief Evangelist

Maplesoft profile

- Founded in 1988
- World-leader in mathematical and symbolic computation
- Spin-off from U. Waterloo research
- Key markets: automotive, aerospace, electronics, research
- Strategic collaboration with Toyota MC 2007
- Privately held



Automotive



Aerospace

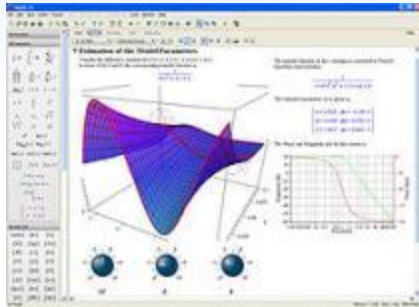


Electronics and information tech.



Modeling and simulation product line

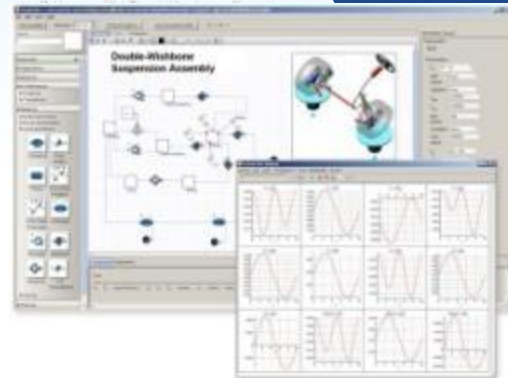
Maple 12



*Essential tool for
mathematics and modeling*

- + Application toolboxes
- + Connectivity toolboxes
- + Reference e-books

MapleSim



*High performance multidomain
modeling and simulation*

- + Add-on components
- + Connectivity toolboxes


Dramatically accelerate your HIL simulation projects

Reduce time in model development

Improve real time performance with no loss of fidelity



Efficient model development



Automated generation of model equations



Symbolic model simplification



Efficient code generation

Model development

Time savings

- Automated equation generation
- 10x faster models and code

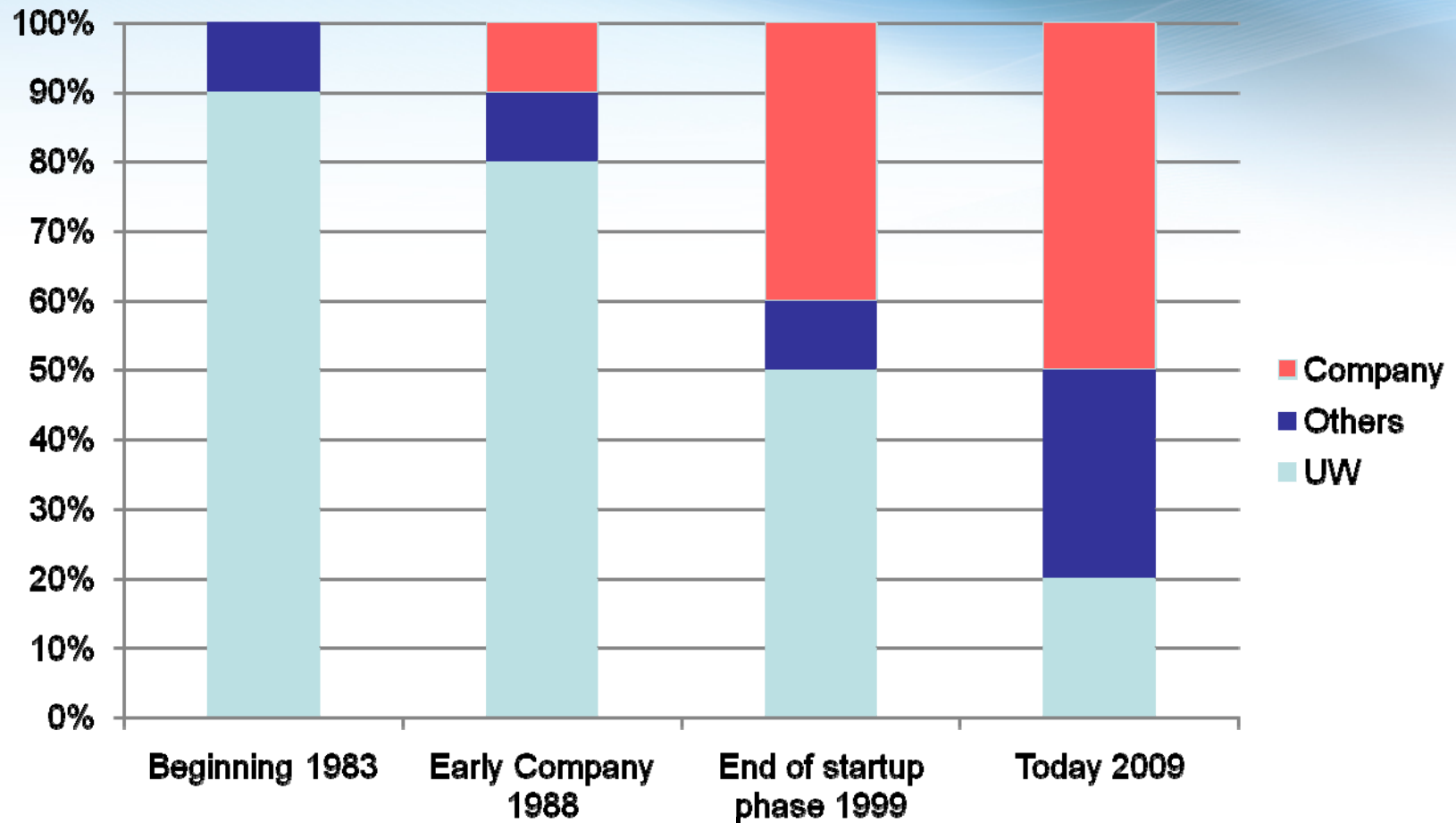
Enabling technology

- More systems feasible in HIL
- Advanced analysis

Maplesoft has historically been an “open” player

- The Maple system is somewhat “open”
 - Low-level kernel is proprietary (C, C++)
 - Math knowledge is in high-level language and is open
 - You can look and play but you cannot take
- We deploy open source tools in product
 - Core numerical libraries
 - Visualization libraries
- Ongoing research collaboration with universities
 - Direct commercialization of new code
- We depend on open source tools for Web and other infrastructure elements

Contributions to code



Benefits and hazards of open philosophy

- Benefits
 - Rapid deployment of latest, specialized code
 - Industry standards
 - Perception as a progressive company

- Hazards
 - Product management and matching customer needs
 - More problematic with more specialized code
 - “cultural debates”

Questions?