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REFLECTIONS ON 25 YEARS AS A MAPLE CHAMPION

1984 – 1989

- Graduate Student, Carnegie Mellon

- Mike Albert, Neil Calkin

  - Casual use to avoid messy derivations using calculus and differential equations

  - Check solutions

  - Graph functions (ASCII)

1989 – 1991

- Research Assistant Professor, Purdue University

  - USENET: sci.math.symbolic

  - Generated FORTRAN code for FEM

  - GUI appears with release of Maple V (1990)
    - educational uses become realistic

1992

- University of South Carolina

  - Recreational number theory

  - Maple V Release 2

1993

- Maple Summer Workshop, U. of Michigan

- Mike Monagan

  - Maple Share Library

  - Hankel functions
    - Initially in Share Library
    - Built-in in Maple 9.5 (2004)

1994

- Revitalizing ESM Curriculum via Symbolic Algebra (1994 – 1995)
  - Robert Lopez

- Maple Ambassador (1994 – 2003)
  - Paola D'Alessandro, Christine Becker

- Maple Summer Workshop, RPI (1994)
  - Jim Herod, Joe Ecker

1995 – 1999

- orthogonal curvilinear coordinate systems
  - written for Maple V Release 3 (1995)
  - now in Student[VectorCalculus]

- shooting method for BVPs
  - package created for Maple V Release 4 (1996)
  - new features of dsolve and DEtools makes this easier

- parachute models
  - published in MapleTech (1997), SIAM Review (1998)

- Maple V for Engineers (Engineer's Toolkit Series)
  - based on Maple V Release 5 (1998)

- Maple User's Group (MUG)

2000 - 2005

- Maple Application Center (2000)

- ODE PowerTool (2001)
  - Collection of Maple 7 worksheets

- Lab Materials for Calculus @ USC
  - Maple 7 worksheets + MapleNet (2002)

- Calculus I with Maple in Blackboard (2003)
  - Maple 9 worksheets + MapleTA

- Maple Summer Workshop (Wilfred Laurier Univ., 2004)
  - Meade: Maple & Its Role in the Development of a Mathematician
  - Yasskin: Some Pedagogical Maplets for Calculus

- MaplePrimes social networking community (2005)

2005 - 2009

- Maplets for Calculus

  - Maple Connect
    Will Spaetzel, Christina Spirou

  - Maplet Launcher for Mac
    Yu-Hong Wang

    - Version 1.1: 40 maplets for Maple 10 (2005)
    - Version 1.2: 94 maplets for Maple 12 (2008)
    - Version 1.3: 124 maplets for Maple 13 (2009)

Maple on the Web: My Story

- Irreducibility tests for lacunary polynomials

  - cgi scripts (1997) [URL]
    - Permission (Dan Dubois, Louise Yamane)
    - Security (Eithne Murray)

  - Maplet (2004) [Maplet]

  - Embedded Component (2007) [Worksheet]

Maple on the Web: My Story

- ## Maplets for Calculus
  - started by Yasskin (in late-1990's) as cgi scripts

  - partnership started in 2004, after MSW

  - rapidly improved and expanded, as did Maplets

  - accessible locally, or (in principle) via MapleNet

  - embedded components appear in Maple 10 (2005)

  - development of Maplet capabilities slows

Maple on the Web: My Story

- [Maplets for Calculus](#)
  - embedded components resolve some limitations
    - visual layout easier, using tables
    - can utilize palettes for input
    - expanded support for hyperlinks within UI

  - but no match for maplet capabilities
    - colors (background, foreground)
    - scripting (multilingual, uniformity)

Maple on the Web: My Wishes

- Improved stability and flexibility of tables

- Improved input (MathML Editor or handwriting)

- Expanded support for scripting of embedded components, as currently exists for maplets (multilingual)

- Support for downloading auxiliary files (images) along with maplet/worksheet

- Ability to encrypt code (grading)

Not The End

- The past quarter century has been a lot of fun for me.

- I've learned a lot of mathematics.

- I've been able to help others learn some mathematics.

- But, more important than the mathematics, I've made some good friends, in Waterloo and around the world.

- I am looking forward to the next 25 years.

Thank you!