HISC ACTIVITIES AT RIACA

Norbert KAJLER

November 21, 1994

RIACA

Research Institute for Applications of Computer Algebra

- New research institute in Amsterdam (Nov. 93)
- Location: science park (CAN, CWI, NIKHEF, etc.)
- Funded by Dutsch Ministry of Education, SMC, CAN, and RISC (Linz)
- Scientific Director: Arjeh Cohen
- Managing Director: Jan Sanders
- main activities started in 1994:
  - HISC (coordinator: Norbert Kajler)
  - OPTICS (coordinator: Eisso Atzema)
- More to start in 1995

$\boxed{\text{HISC}}$

Human Interaction for Symbolic Computation

Topics:

- alternative input technologies
- direct manipulation of subexpressions
- manipulation and exchange of large expressions
- interactive graphics
- intelligent session management
- interaction with theorem provers/checkers
- protocols for frontends and graphics engines

HISC Semester

January 1994 → July 1994 → June 1995

Visitors:

- Ron Avitzur
- Olaf Bachman (Kent State University)
- Michael Mc Gettrick (NAG)
- Jari Multisilta (Tampere University)
- Nadine Rouillon (Bordeaux University)
- Neil Soiffer (Wolfram Research)
- Eugene Zima (Moscow State University)

HISC

On-going activities:

- Development of CAS/PI
- Direct manipulation of curves and surfaces
- Use of chains of recurrences in plotting
- Protocols for frontends and graphics engines
- Visualization of combinatorial objects
- ACELA project (Interactive Book for Lie Algebra)

HISC Events

Workshop:

- March 10–11 1994
- 19 lectures, 10 software demonstrations, 50 participants
- 6 Sessions: Education, Theorem Provers, Math Editing, Towards Interactive Books, User Interfaces, Misc
- Six-pages report published in CAN, EUROMATH, SIGSAM, and SIGCHI Bulletins

Weekly seminar:

- From June to August 1994
- First speakers: O. Bachman, N. Rouillon, R. Avitzur, N. Kajler, F. van Wingerde, H. Elbers, A. van Leeuwen, I. Herman, N. Soiffer, E. Zima, M. Mc Gettrick

HISC Publications

HISC proceedings/book:

- Collection of selected papers from the workshop + invited authors
- To appear on the first quarter of 1995

RIACA Technical Reports:

- Survey of User Interfaces for Symbolic Computation (N. Kajler, N. Soiffer)
- Direct Manipulation in Mathematics User Interface (R. Avitzur)
- An interface between Macsyma and IZIC (O. Bachman)