The (La)TeX case study

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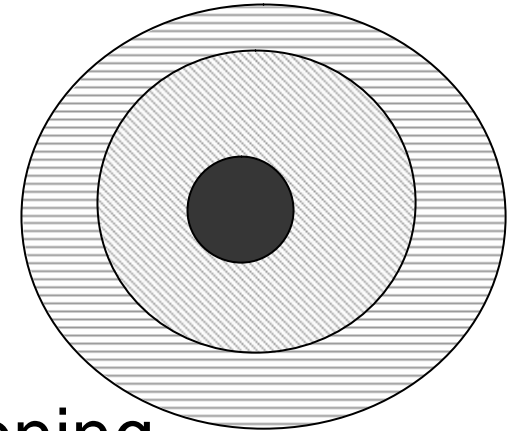
GREMAQ - University of Toulouse

http://www.idei.asso.fr

The case study project

- ? Is part of a wider effort by economists to understand the open-source phenomenon.

- ? Consists in gathering data (interviews, statistics) on a specific open-source project.

- ? Is aimed towards open-source developers and policy makers as well as economists.

Plan of the presentation

- A comparison with Linux.
- Preliminary findings.
    - Output: the code.
    - Process: the project's functioning.
    - Framework: the organization.
- Areas for future research.
- A call for contributions, comments, criticism!

Linux and TeX

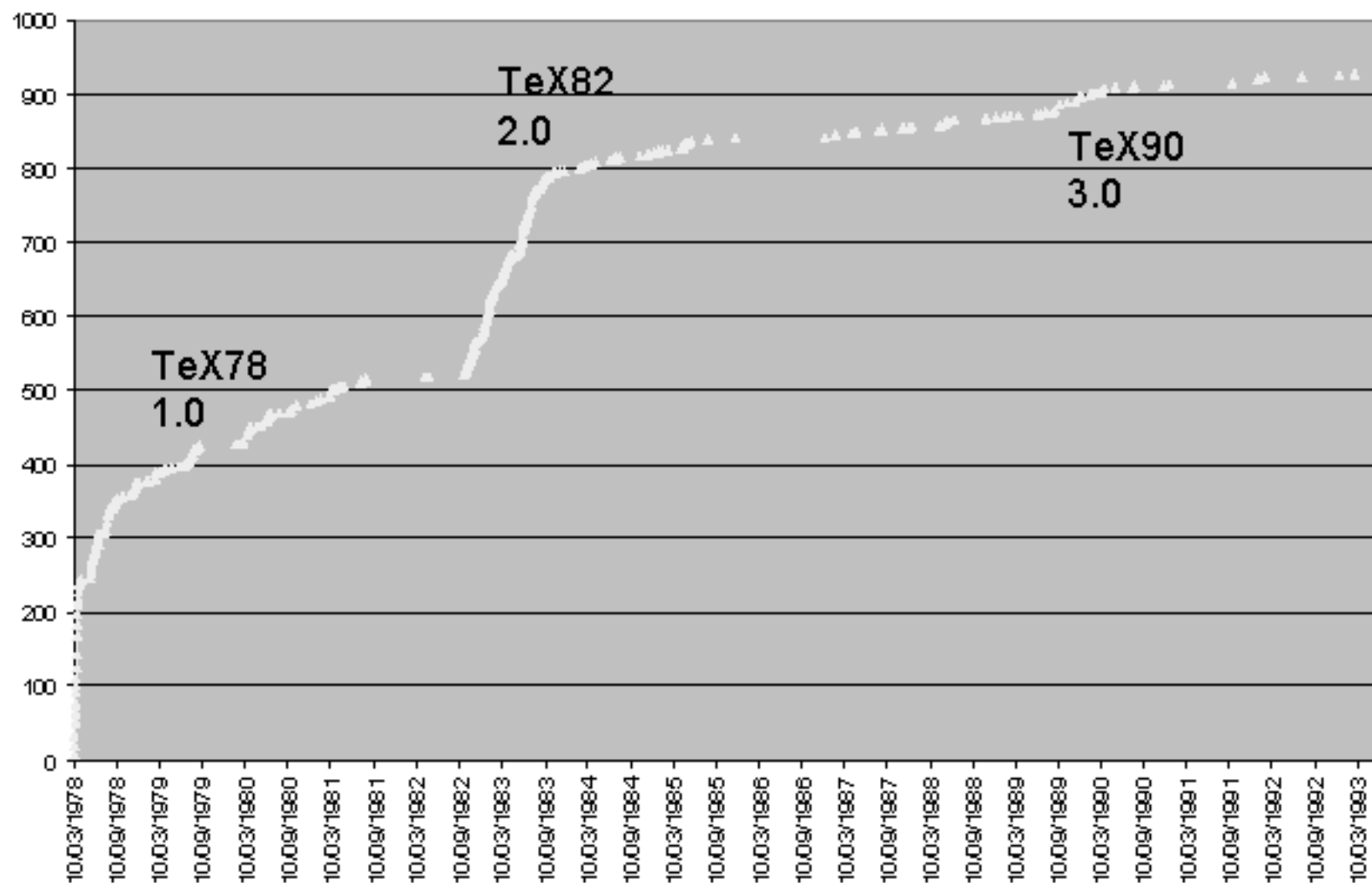| Linux	TeX
Developed in the 90s	Developed in the 80s
Operating system	Typesetting system
Hackers	Academics and publishers
Developers' oriented	Users' oriented
Charismatic leadership	Messianic leadership
GNU	BSD

The code's development.

- The stages in the development of the TeX core—78, 82, 90.

➡ The ideal code

- Depends on the stage in the evolution in the software—monolithic vs. modular.

- There is a "breaking point" when the core cannot anymore accommodate new needs—NTS, Omega, ConTeXt.

Cumulative number of bugs in TeX by day of discovery.

TeX82
2.0

TeX90
3.0

TeX78
1.0

The process and its dynamics.

- ✍ The difference between the development of the software and its diffusion.

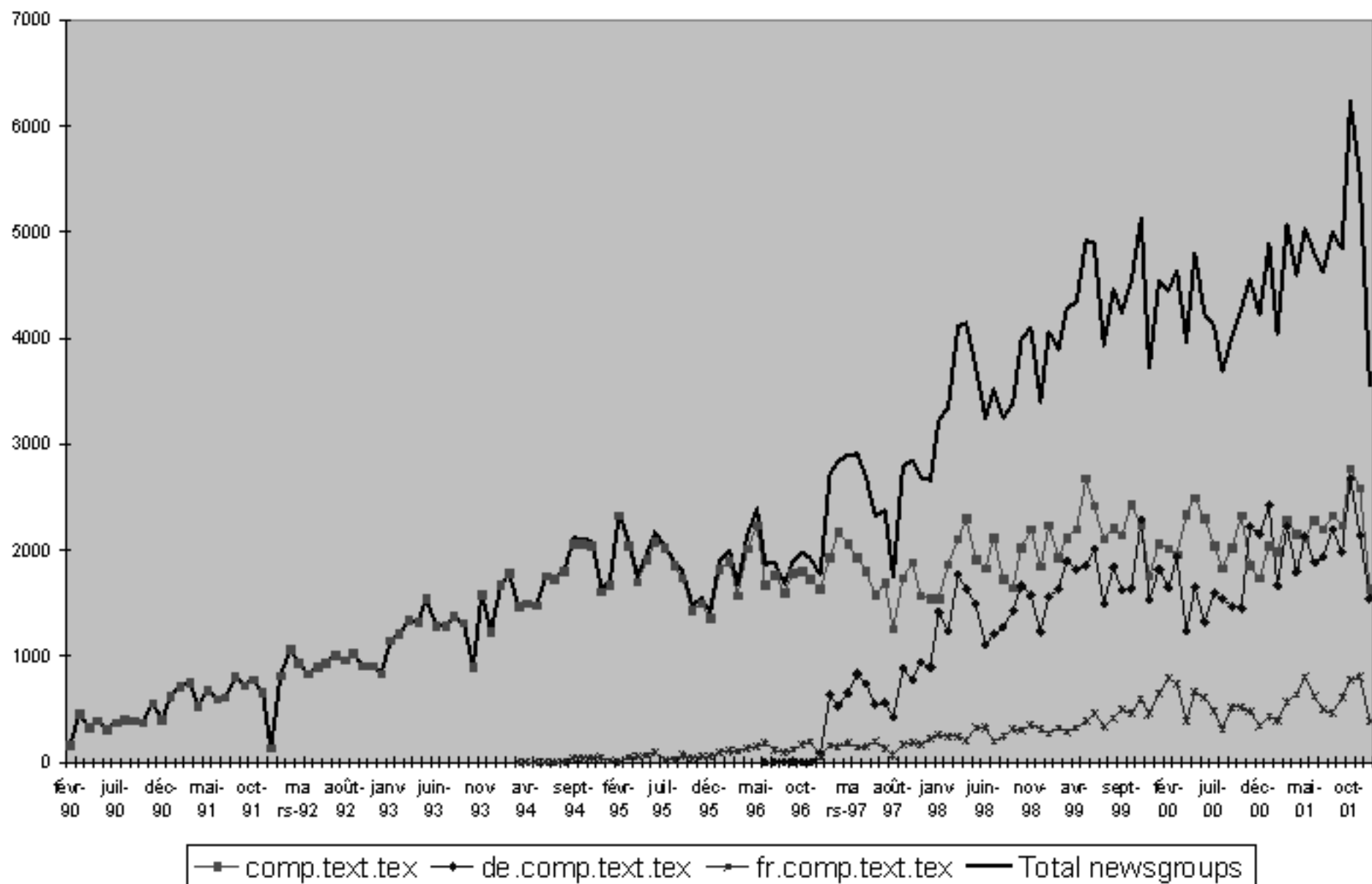 - ✍ Competition vs. centralization.

  - ✍ The chronology.

  ⇒ How dependent is one onto the other?

The process and its dynamics.

- The limits that are specific to open-source development and diffusion.
  - Coordination methods.

  - Concept and tools.

  - Involvement over time.
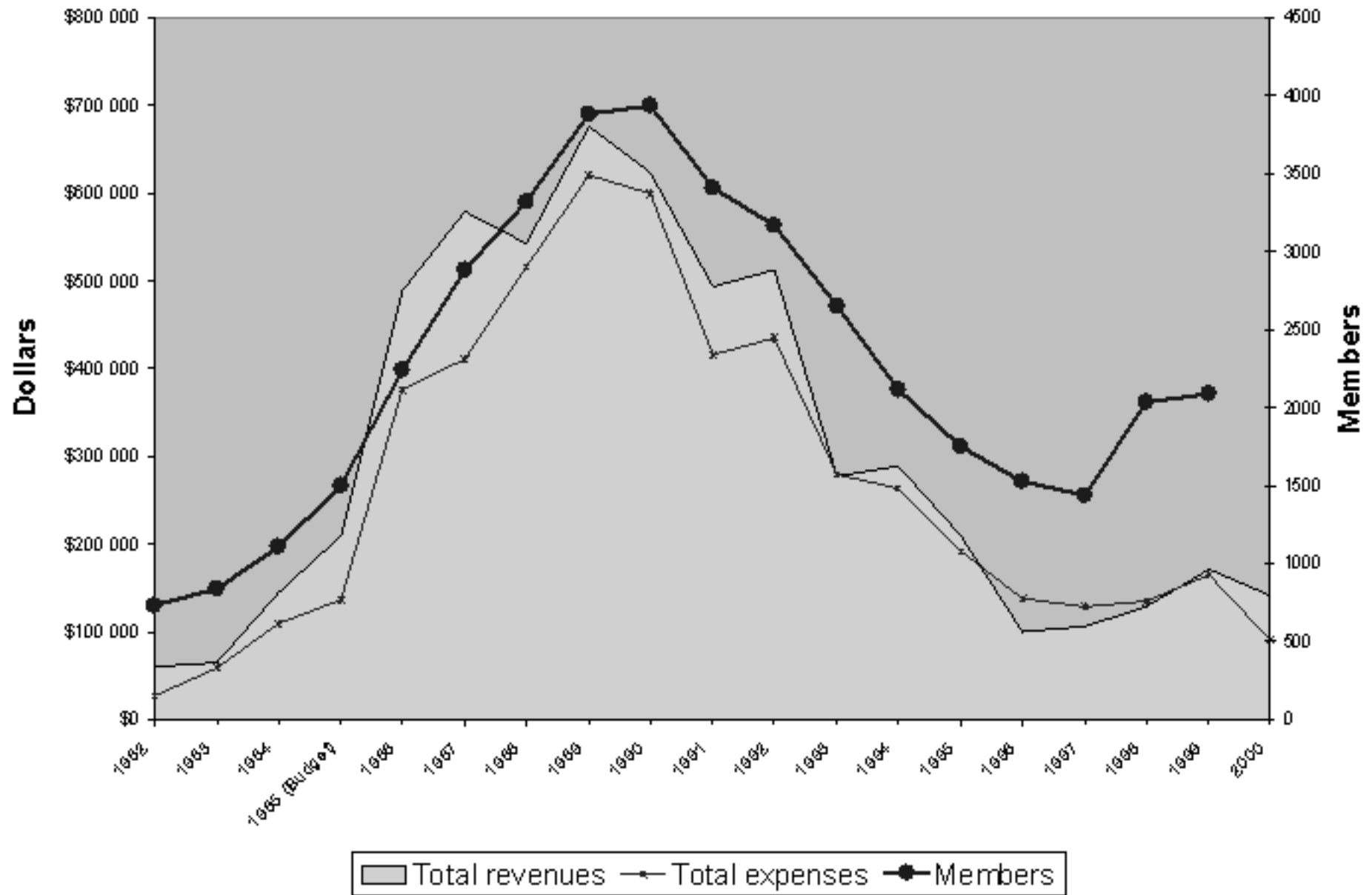
Number of postings to TeX newsgroups by months.

Legend: comp.text.tex · de.comp.text.tex · fr.comp.text.tex · Total newsgroups

X-axis labels: févr-90, juil-90, déc-90, mai-91, oct-91, mars-92, août-92, janv-93, juin-93, nov-93, avr-94, sept-94, févr-95, juil-95, déc-95, mai-96, oct-96, mars-97, août-97, janv-98, juin-98, nov-98, avr-99, sept-99, févr-00, juil-00, déc-00, mai-01, oct-01

The TeX rules and culture.

- Changed over time;
  - Emergence of new development teams.
  - Emergence of new users' groups.
  - Solidification of rules into institutions.
- Was user-oriented from the beginning on.
  - How was the link between users and developers maintained?

TUG revenues and membership by year.

Questions still pending

- ? The influence of commercial development on TeX.
- ? A comparison with commercial typesetting software.
- ? The maintenance of the software and its practical difficulties.
- ? The finer details of how projects are coordinated and led.

A call for contribution/criticism

- Please download my paper or read it in the TUGboat.

- Note my mistakes and omissions and report them to me.

- Make suggestions.

- My email:

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