## Organization of the CGAL Project

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LIAMA 10th Anniversary, 2007

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# Outline

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# **Project Goal**

#### Original mission statement from 1996

"make the large body of geometric algorithms developed in the field of CG available for industrial applications"

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A bottom-up approach towards applications.

Technical criteria

Robustness, efficiency, ease of use, homogeneity.

A strong connection to ongoing research.

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## **Project History**

Release history, code growth, underlying European projects.



# CGAL in Numbers

#### 500,000 lines of C++ code

- 10,000 downloads/year (+ Linux distributions)
  - 3,000 pages manual
  - 4,000 subscribers to cgal-announce
    - 850 subscribers to cgal-discuss
    - 120 packages
      - 40 active developers
      - 12 months release cycle
        - 7 Google's PageRank for cgal.org

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## • Main partners: INRIA, Max-Planck Institute Saarbrücken, Tel Aviv U., ETH Zurich

• Former or secondary: U. of Athens/FORTH, Utrecht U., Free U. Berlin, U. of Groningen, Stanford U., SciSoft, U. of Florida...

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## **Current Interaction Process**

# Until now: the main *formal* link is the European research projects.

Currently: we are working on a more *formal* and *perennial*, Consortium Agreement.

Developing CGAL further requires a legal structure that:

- lasts beyond 3 years contracts
- takes into account partners not attached to such projects
- is more open to institutes/universities/companies
- gives the project an enhanced visibility and representation
- improves the decision process for long term direction
- opens a door for companies interested in helping CGAL

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## GeometryFactory: founded by Andreas Fabri in 2003, with support from INRIA-Transfert.

Activities: selling licenses of CGAL components, support, custom developments, training...

Customers: >30 companies in various application domains.

Personnel: currently 2 persons



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## License: Open Source and Commercial

Dual goals:

- Open Source: to make it a "de facto standard" and to allow external contributions
- Commercial: to get money to improve CGAL further

The Open Source license has some constraints:

- QPL: most of CGAL (prohibits commercial use)
- LGPL: core parts like the kernel (free to use)

Summary: users developing non-Open Source code, have to buy commercial licenses of CGAL (special price for academy).

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## Technical Coordination: the Editorial Board

The Editorial Board (10 members):

- reviews submissions of new packages
- is responsible for the quality and homogeneity of CGAL

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- promotes the recognition of package authors
- coordinates the communication and promotion (workshops)
- decides technical questions
- plans releases

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## Day-to-day Work

A GForge system hosting an SVN repository for the code

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- Daily internal releases with distributed test-suites for portability
- Our own documentation tools:  $\[MT_EX \Rightarrow PDF, HTML\]$
- Developers manual and mailing-list
- 2 one-week developers meeting a year

## **Developers Meetings**

#### A key communication channel for boosting development...





## **Developers Meetings**

## ... and a social link !





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## How to Get Involved ?

### As a group/institute:

• For large multi-years contributions, discussion on strategy is required with the other Consortium partners.

#### As an individual contributor:

- Being a user first is best to become familiar with the style
- Submit improvements to the existing code, or
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In any case: contact us !

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## Thank you for your attention



