Thoughts on Libre Software
The GNAT Ada 95 Experience

Franco Gasperoni
gasperon@act-europe.fr
ACT Europe
Overview

- From Ada 83 to Ada 95
- The GNAT Project
- ACT-Europe & Ada Core Technologies
Ada: 1983-1986

✔️ Excitement:
- Industry
- Universities

✔ Very proprietary solutions:
  – products
  – environments

✔ High cost of entry

✔ Newcomers cut off
  – Students, academics, …
  – new industrial apps
Ada 95

Ada standard revised every 10 years

✔ OOP
✔ Mixed language programming
✔ Improved Systems/Real-time support
✔ Distributed Systems
✔ Information Systems
✔ Numerics
✔ Safety & Security
✔ ...

Ada standard revised every 10 years
From Ada 83 to Ada 95

The GNAT Project

ACT-Europe & Ada Core Technologies
The GNAT Project

✔ Started at NYU in 1991

✔ Over 3 M$ funding for 3 years

✔ Commitment to use the GPL License

✔ Copyright assigned to the FSF

✔ Commitment to use Ada
Why GNAT was Funded?

- Have at least 1 high-quality Ada 95 technology
- Open Ada 95 to everyone
- Generate excitement in the Ada community
- Make sure vendors would adopt Ada 95
Ada Today

✔ GNAT jump started Ada 95 market

✔ Anyone has access to high quality Ada 95 solution

✔ Not a captive market

✔ Zero cost of entry for Libre SW developers, academics, students, hobbists
From Ada 83 to Ada 95

The GNAT Project

ACT-Europe & Ada Core Technologies
GNAT Professional

- The first Ada 95 technology
  - The only complete Ada 95 technology
- Available for a large number of platforms
- Shares common GCC back-end with other GCC languages (C, C++, …)
- Interoperable with other languages
- Over 75% of code has been added by ACT
100% Committed to Principles of Open-Source

✔ We make a public release of GNAT for
  – Libre-Software community
  – Academic community
  – Research community

✔ Derived from professional release

✔ Tens of thousands of GNAT users world-wide

✔ Allows people to try Ada 95

✔ Has created many babies
Libre Software Advantages

- ✔ No turn-over
  - Engineer-friendly

- ✔ Allows us to innovate
  - Focused on technology not marketing

- ✔ Allows us to foster local pool of know-how
  - Can freely work with students & universities

- ✔ Allows clients and users to contribute
GNAT Professional is a Product
... with an Libre Software License

- have access to the sources
- redistribution permitted
- no limit on number of installs
- no token-license handicap
- no run time license fees
- no Easter eggs
Our Business Model

proprietary software

GNAT Professional

price of software
price of support
Project Support

☑ Access to product updates
  - Via secure Internet access

☑ Responsiveness to questions & problems
  - Help in Ada 95
  - Advice on the best way to use the GNAT tool set
  - Help with use of GNAT special features
  - Ensuring the technology is used effectively
  - Help when interfacing to other languages
  - Help when interfacing with libraries
  - Help on system issues
  - Rapid corrections/workarounds to problems
  - Priority consideration of enhancement requests

☑ Intermediate releases when necessary

☑ On-site project support
Emphasis on Project Support
- reduces costs
- reduces risks
- time-to-market
Project Support and Cost Reduction

- If project support saves 3 min/day per developer the client makes money
- Developers do not need to become “experts” in the use of the toolset
Project Support and Risk Reduction

✔ End-to-end control of the technology chain

✔ Guaranteed solution to unforeseen problems in the use of the toolset
Project Support and Time-to-Market

✔ Today’s technology landscape is daunting

✔ Project Support allows customers to rely on us for core technology know-how

✔ Customers can be productive very quickly
GNAT Professional

The very best of commercial software...

...without the disadvantages of proprietary software