# **Objectivity Case History**

## **Customer Information**

Customer: Fermi, Argonne, and Rutherford-Appleton

Industry: Hep

Application Domain: MINOS Project - Neutrino Experiment

Status: Beginning of project and selection cycle – (as of 7/24/98)

Platform: Distributed Databases, complex relationships

Compiler: C++, Java front in Other Tools: SQL ++ potentially

**Background** [From the prospect] Minos will be a 10-year, \$130 million physics experiment involving three national labs (Fermilab, Argonne and Rutherford-Appleton in England) and about 10 universities (UMN, Indiana, Tufts, Stanford, Caltech, UT Austin and a few others). We envisage a database with servers in 3 locations. The other sites will query the servers over the internet. There will be ~5 people who actually change the software and about 50 users who just need access to the data. The language of the core group will be C++, though some of the users will doubtless refuse to leave FORTRAN. MINOS is a neutrino experiment, which means it does not have large amounts of data (we expect the whole database to be around 500 Mbytes). I expect we will use ROOT (from cern) heavily in the analysis. **Software Need:** 

Just to compare figures, I would like to get a quote on X servers and Y user licenses.

#### When:

We will be buying something in the next year and hopefully much sooner than that.

**Budgets**: We have about \$\$\$ budgeted for database software purchases. We are supposedly scheduled to spec and design it before the end of this year, but it looks like a purchase will be next year.

#### **Developers:**

At the moment we are comparing different systems, so we should just assume 5 developers who have average amounts of experience. This is pretty close to what will eventually happen. It may not be exactly accurate, but it has to be sold to the software group before anything else happens.

### Work to date:

So far our data structures are organized in Adamo banks and tables. Nothing has been done specifically related to the database.

#### Platforms:

There will be 3 servers with a grand total of 50 users. The platforms will all be UNIX for the servers (probably DEC Unix, SGI or Linux if that works), and Windows NT/95 or Linux on the users. Users will access the executables through GUIs and through user-written function calls. Users will most likely all be using calls through the 'Net- SQL or ODMS or whatever you supply.

## **Contact Information**

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