**To: ASTD & CTLS lists**

**Re: G++ Experience**

From: Steven Bellenot

The following the meeting on C++ on Monday, I (with help from both John Wedel and Justin Magaram) converted my history "abstract data type" from C to C++ (actually to the g++ format). I also converted the filter hgram which uses this history data type. The resulting g++ code is in the directory /usr/tw/steve/g++ and the original c files are in the directory /usr/tw/steve/g++/cfiles.

The history files were written in the style of data abstraction so the conversion was mainly editing functions:

```
from:
phony ( i, z, x)
int i;
double z;
history *x;
{
...
    dosomething_with ( x->history_field);
...
}
```

```
to:
void history::phony ( int i, double z )
{
...
    dosomething_with (    history_field);
...
}
```

However, the new history package has an example of a friend function and a constructor of an array of classes. The g++-compiled hgram is more than 10% faster than the old C-compiled hgram.

Around 600 lines of code were converted in an afternoon.