



Appendix C - Product History

Development

AppletVIEW got its start in 1997 as the original Internet toolkit for National Instruments LabVIEW. Every year NI gives awards for the best worldwide LabVIEW applications, and AppletVIEW has been a key part of several of the winning entries. Nacimiento Software Corporation has been a National Instruments Alliance company.

The original application was in virtual instrumentation - controlling equipment using web browsers.

As a former National Instruments Alliance member, we were one of the very first to enable instrumentation over the Internet; many awards have been won using the software; NI has incorporated parts of the technology in their products.

Enterprise, database and data integration, online education, collaboration and research tools and online markets are areas we're looking at for further application.

Ingredients

What we found out is there are 3-4 kinds of data in instrumentation (AppletVIEW handles all four):

- Streaming data (100's or 1000's of times/sec)
- Cached data ("last known value")
- Polled data ("only want to know when I ask")
- Methods (send some data and get something else back)

We also found out users have different levels of permission, and have different interface needs. The architecture controls access to systems, and enables generation of different interfaces for different users.

Connection to the system is based on a model of an "access card" - the user has to retrieve an XML file which has a permission key and a user interface description for a set of objects. Once retrieved, the XML is used to verify permissions and dynamically generate a graphical interface for the user appropriate to what environment they are in - web browser, application, phone, palm pilot, phone, etc.

Because of the "standard plug" conventions in instrumentation, the architecture is very modular and easy to extend.