# Repository and Releases

## Status and Plans

ATLAS Software Workshop

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# Overview

- Packages
- Supported Platforms
- Releases
- Tools and Quality assurance
- Miscellaneous

# PACKAGES

- **In the repository (under $CVSROOT/offline)**
  - **Production (TDR) software:** 25 top level packages mainly in F77 and Age
  - **Domain software:** 16 top level packages, mainly in C++
  - **Applications:** top level package for various applications across domains (for the moment used for dice and atrecon executables, job scripts and datacards)
  - **Doc:** top level package for documentation
  - **Contrib:** top level package for contributed software: 1 package in F77 and C++
  - **External:** top level package for external software: 2 packages in C++

  **Lines of code:** F77 480 K Age 93 K
  C++ 269 K (compared to 197 K in Dec. 98)
- **In release (under $SRT_DIST/current)**
  - 40 top level packages (106 packages total)

# PLATFORMS

- Supported
  - HP, DEC, IBM, LINUX and SUN
    - hppa1.1-hp-hpux10.20 with HP aCC 1.18
    - alpha-dec-osf4.0b with Digital C++ 6.0
    - powerpc-ibm-aix4.1.5.0 with IBM xlC 3.1.x (moving to aix 4.3)
    - i586-pc-linux-gnu with egcs 1.1.1
    - sparc-sun-solaris2.5.1 with SUN CC 4.2
- Not (fully) supported
  - SGI: partly supported by Boston (mainly for production), low priority
  - WNT: to be decided...

# RELEASES (1)

- Fortnightly (developers') releases
  - so far averaged 20 releases (HP, DEC, IBM, LINUX) in ~10 months
  - aim at weekly releases?
- Nightly builds
  - cron jobs update to the head, build from scratch on 5 platforms (HP, DEC, IBM, SUN, LINUX) and produce "reduced" build logs using the SRT make-chopper utility
  - TO DO:
    - Improve readability of build logs
    - Advertise build results to developers concerned

# RELEASES (2)

- Release frequency and release procedure
  - maybe fortnightly releases suffice
  - even so, the procedure could be simplified and sped up by
    - encouraging package coordinators to make pragmatic decisions on supported platforms (a la ATRIG)
    - improving package structures and dependencies to allow or facilitate “reverting” to earlier working versions
    - using nightly builds for early debugging
      - we’ll soon see, so far the head is mostly broken)
    - easing the developers’ job
      - WWW based GUI for building on supported platforms automatically and remotely - in preparation by L. Tuura?

# RELEASES (3)

- releasing some packages independently or using binaries from previous releases
  - debatable and not (yet?) supported by the tools
- building on local disks and/or dedicated machines for initial steps
  - some speed-up (not yet worth the effort…)
- building on fastest platforms first
  - some speed-up but in the end you do have to wait for the slower ones...
- working incrementally at the preparation stage
  - in practice it saves very little time at a considerable risk hiding previous failures and incorrect dependencies; a “clean” start has so far been found indispensable…
- sharing partial or full support for releases on some platforms with other institutes
  - to be investigated

# Tools and Quality Assurance

- **Browsers**
  - cvsweb (latest version installed by C. Onions)
  - Bonsai (installed by R. Iles and L. Tuura)
- **Dependency Grapher** (J. Hrivnac)
  - new version displaying using as well as used packages to be installed
- **CodeCheck, Insure++, Purify and Logiscope**
  - no clear policy yet on who runs what and when…

# Miscellaneous

- **SPIDER SRT project**
  - common glossary and work model for a Software Release Tool to be used for requirement consolidation, to be followed by evaluation of existing implementations, adoption of baseline solution and build plan *- see S. Fisher's presentation on Friday*
- **Manpower and sharing of responsibilities**
  - work in progress at LBL *(C. Tull et al.)*
- **Collaboratory tools**

  *(e.g. electronic notebook, see presentation at AWWC on Tuesday)*
  - may facilitate collaboration of librarians and developers and coordination of releases *(to be investigated with LBL)*