



# Austin Group Status

## October 2000

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# The *Austin Group*



- ❑ **The Austin Common Standards Revision Group**
- ❑ **An open industry initiative to revise the core *POSIX standard* and the *Single UNIX Specification*; standards that lie at the heart of today's open systems**
- ❑ **Full-time chair and editors from The Open Group**

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# *The Austin Group* (Cont'd)



- ❑ **The *Austin Group* combines the formal standards process of the IEEE and ISO, with the industry standards of The Open Group and the community at large.**
- ❑ **Electronic participation**
- ❑ **Participation in the group is free.**
- ❑ **Draft specifications are available for download to registered members of the group from the world wide web.**

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# About the *Austin Group*



- ❑ **360 Participants (as of Oct 9 2000)**
- ❑ **Wide industry support,**
  - AT&T, Compaq, Fujitsu, HP, IBM, Lucent, Microsoft, Red Hat, SGI, Siemens, Sun,*
  - DoD, USENIX, Canada Revenue*
- ❑ **Participation in the *Austin Group* from the Open Source community includes**
  - The Linux Standard Base, NetBSD, FreeBSD, and many others.*

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# JDOCS Procedures

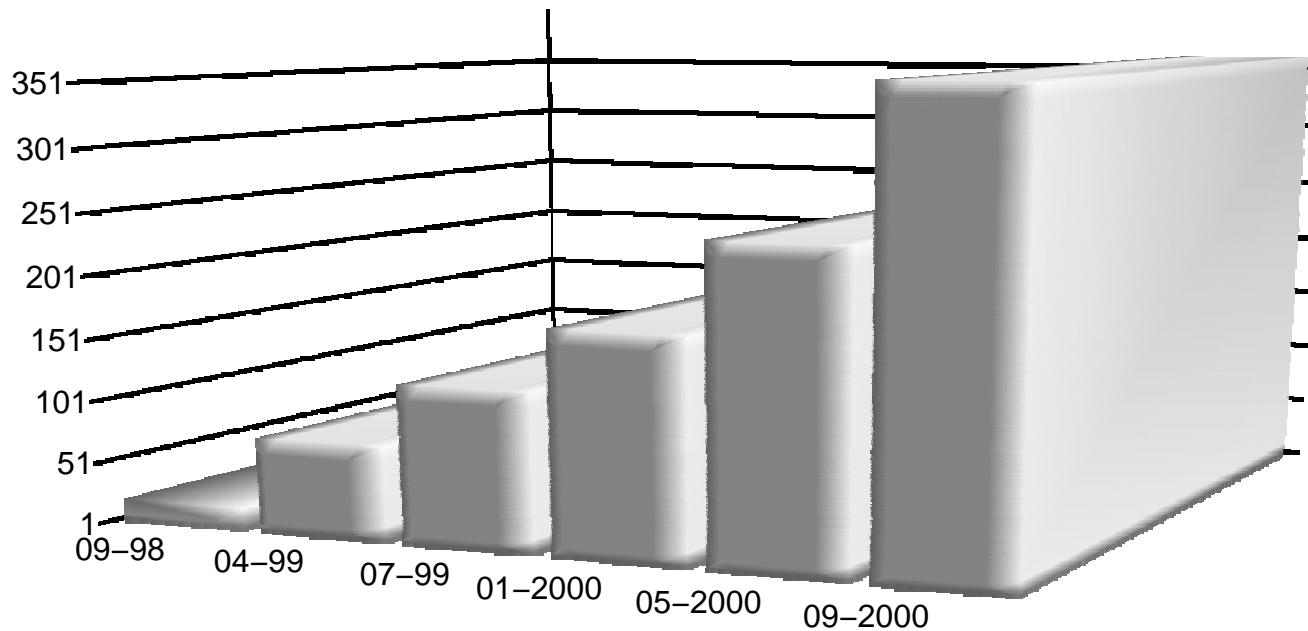


- ❑ **The Austin Group operates under the JDOCS procedures**
- ❑ **Procedures *approved* by the three organizations**
- ❑ **Officers**
  - Chair
  - Three organizational Reps (Ors)

# Membership Growth



# of Members of the Austin Group



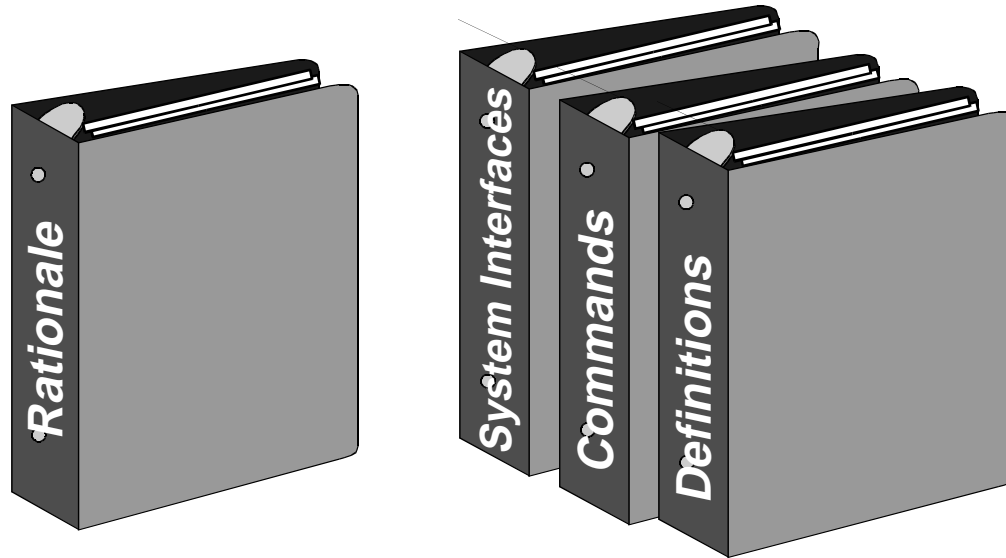
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# Objectives



- ❑ **To target the joint specification at the programmer / user rather than the system implementor**
- ❑ **Organization based on the Core volumes of the Single UNIX Specification, organized alphabetically, and including Rationale**
- ❑ **To produce a new standard in year 2001.**

# The New Common Specification



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# Progress



- ❑ **First Meeting Sep 1998 *Austin, Texas***
- ❑ **Agreed the principles and the scope of the project**

# Progress to Date *June 1999*



- ❑ **MoU signed between The IEEE and The Open Group**
- ❑ **Draft one completed (2500 pages)**
  - based on core volumes of the Single UNIX Specification
  - Alphabetical man pages
  - POSIX options and rationale integrated
  - Terminology Part 1 (shall instead of will)

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# Progress to Date *October 1999*



- **Draft two completed (2700 pages)**
  - Terminology rework part 2 (more shall).
  - Conformance rework

# Progress to Date May 2000



- **Draft three completed (3200 pages)**
  - XNS 5 Version 2
    - *Sockets*
    - *IP Address Resolution*
  - POSIX 1003.2d (Batch Services)
  - POSIX P1003.1a
  - POSIX P1003.2b
  - POSIX 1003.1d \*
  - POSIX P1003.1j \*
  - Terminology Part 3 (shall vs must)

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# Progress to Date *October 2000*

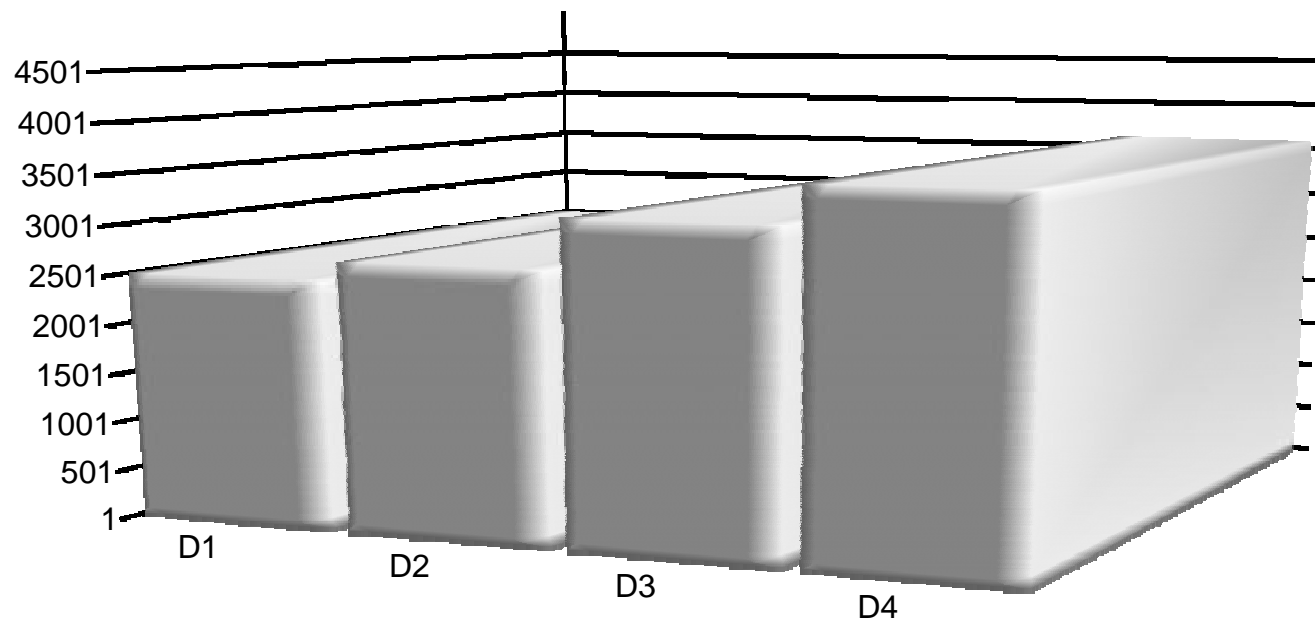


- **Draft four completed (3590 pages)**
  - *"Feature complete"*
  - POSIX 1003.2q
  - C99 Alignment
  - XRAT volume

# Page Count



## Draft Page count



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# Project PAR and Scope



- ❑ **Revised PAR approved Sep 21 2000**
- ❑ **Clarifies the contents of the document**

*(PAR is an IEEE term, for Project Authorization Request)*



- **Aardvark is the Austin Group bug eater**
  - A format for bug reporting, backed up by a set of utilities to collate and format bugs (a lexer is the core)**
  - Allows all bugs from many sources to be automatically processed and collated into page order into a single change request report**



# Aardvark (Cont'd)



Subject: BUG in <document\_name>

@ page <no.> line <no.> section <no.> objection|comment|editorial [Comment]

Problem:

Explain why here. Be sure to add sufficient explanation for someone not familiar with the problem to be able to make a decision

Action:

Be specific. For example:

Change "leftmost character" to "first character in the string"

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# Aardvark (Cont'd)



## ❑ **Objections**

—*If you would vote against approval of the submission if that issue is not resolved*

## ❑ **Comments**

—*Where you believe a better solution is available, but the issue would not cause you to vote no*

## ❑ **Editorials**

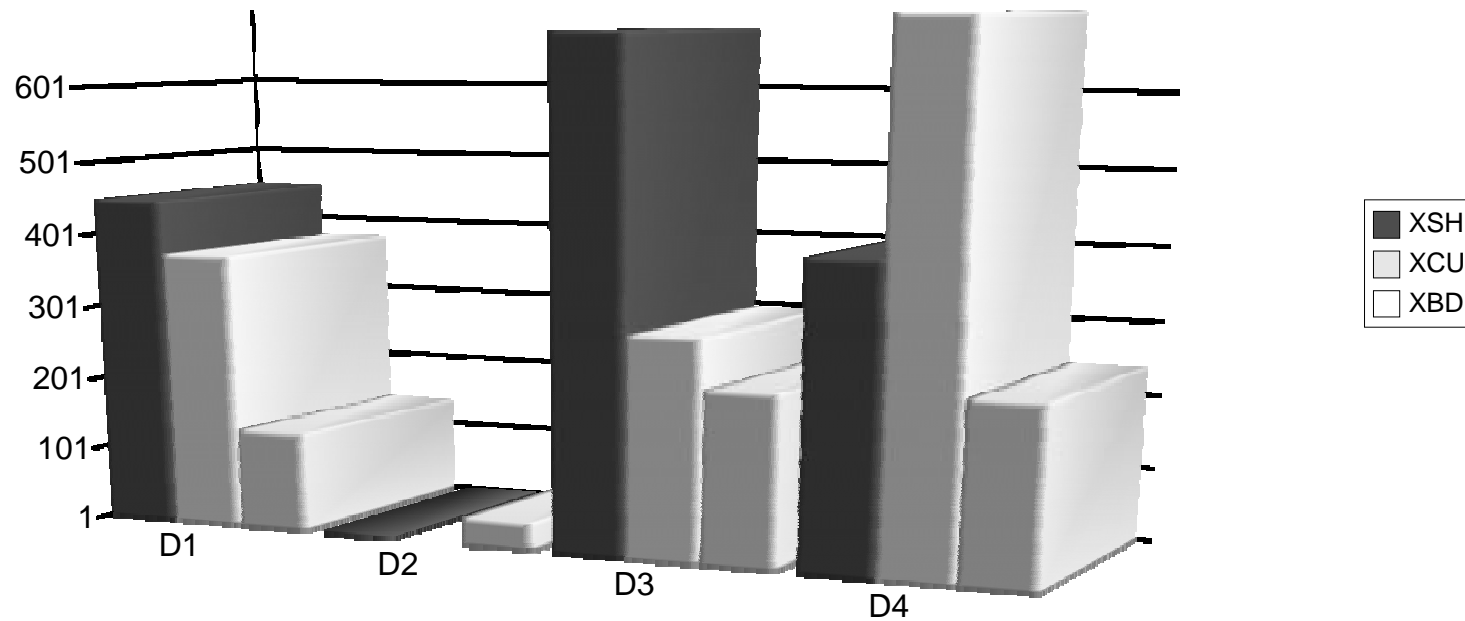
—*Not discussed at the meeting unless the editors wish to*

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# Aardvark Totals



Aardvark counts

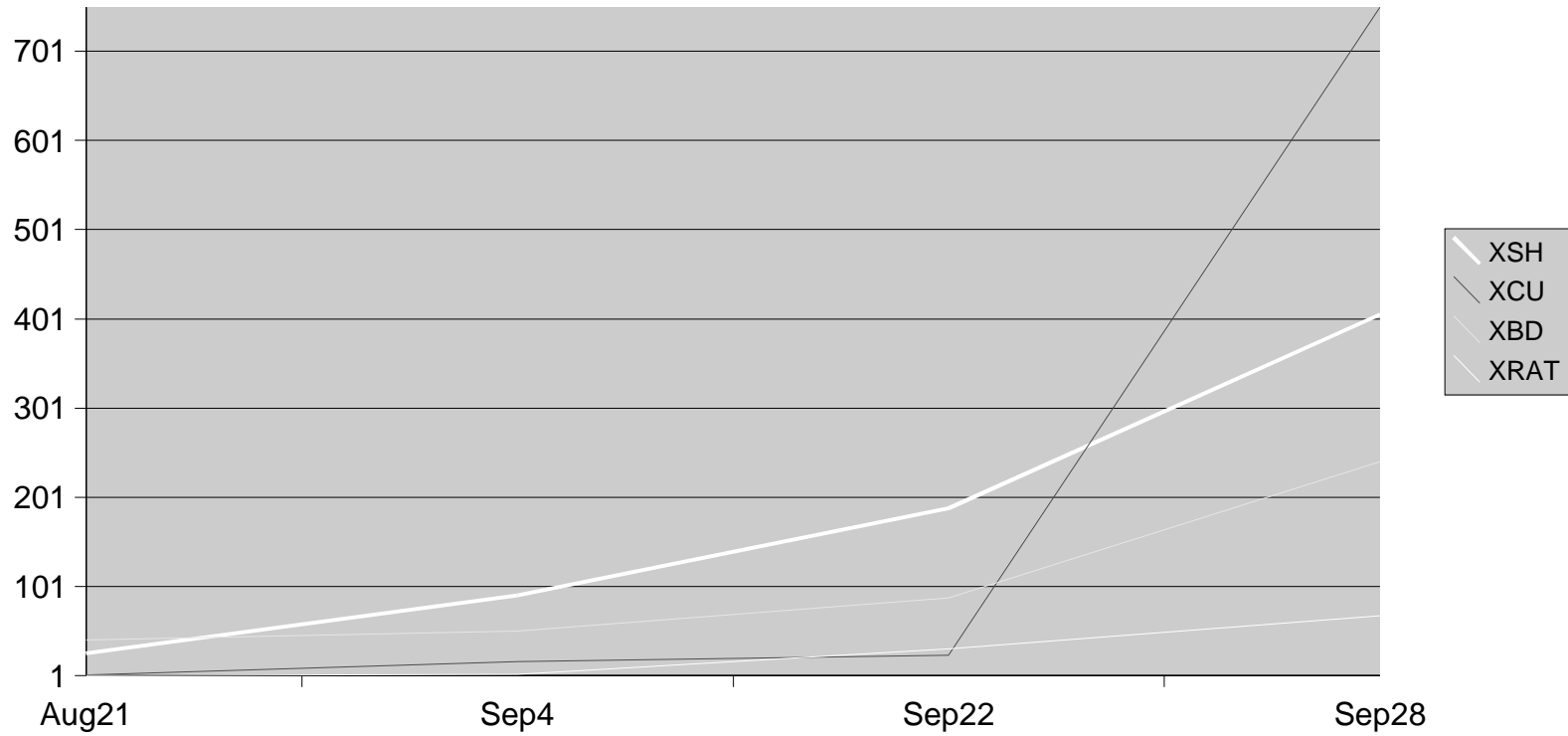


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# Aardvark Analysis for Draft 4



## Aardvark Rate



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# Possible Pro-forma Responses



- ❑ **R1.Reject: The requirement is from a base document and to change it is out of scope. Bringing it in scope would require an interpretation, corrigenda or resolution from the appropriate body.**
- ❑ **R2. Reject: this interface is not a candidate for Legacy, the list of Legacy interfaces was considered in March 1999 and is now final. It is widely used in historic practise and deprecating this interface would break the contract with the application developer.**
- ❑ **R3. Reject: we cannot see the problem at the referenced lines, as such this comment is non-responsive.**
- ❑ **R4: Reject: no action is specified in the aardvark comment.**
- ❑ **R5: Reject; The review team disagrees with the problem statement because.. ... {further rationale needed}**
- ❑ **R6: Reject: The review team believes that accepting the proposed change would decrease consensus.**

# Ballot Status



- ❑ **Draft 4 was the first draft to go for concurrent IEEE and ISO balloting**
- ❑ **IEEE Ballot open Aug 8 thru Sep 26**
- ❑ **ISO Ballot Aug 31 thru Dec 31**

# IEEE Ballot Status



**Number of members of ballot pool: 66**

**Affirmative votes : 34**

**Negative votes : 15**

**Abstention votes : 9**

**Votes cast = 58 = 87% return, 15% abstain**

**34 Affirmative, 15 Negative = 49 votes**

**%Age Affirmative= 69%**

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# Plenary Meeting



- ❑ **Primary goal to review change request reports for each volume**
- ❑ **Many items have been predisposed with *Ed Recommendations***
- ❑ **Some items will be deferred until certain slots when Gary Miller will join the meeting**



# Technical Issues



- SOCK\_RAW where to place text (XBD ERN 52)**
- Integral types (XBD ERN 237)**
- NaN handling in maths funcs (many XBD and XSH)**
- Legacy or OB or no change (XSH ERN 4)**
- Executable object (XSH ERN 89)**
- Exit() and \_exit() (XSH ERNs 98,99)**
- Wide character v character (XSH ERN 128,129,130)**
- Restrict changes (need actual edits enumerated) (XSH ERN 202, 256)**
- Poll (XSH ERN 254)**
- Francois Riche issue (XSH ERN 268,274)**
- Rename() – TASA v shall (XSH ERN 314)**
- Vfork() (XSH ERN 387)**
- SIGXFSZ (XSH ERN 405)**
- 8 bit transparency (XCU ERN 4)**
- Ar (XCU ERN 49)**
- Vi (XCU ERN 58, 626)**
- Localedef repertoire maps (XCU ERN 385)**

# Milestones



- ❑ **Austin/31 : *Joint Revision Project Timeline***
- ❑ **Review Meeting**
  - October 2000**
- ❑ **Draft 5 December 15<sup>th</sup>** (*The Open Group company review*)
- ❑ **Review Period Dec 15 thru Feb 14<sup>th</sup>**
- ❑ **Plenary meeting March 1<sup>st</sup> – 5<sup>th</sup>**
- ❑ **April 5<sup>th</sup> Sanity Draft**

# Challenges



- **A joint project has some interesting challenges to be overcome**
  - working and balloting procedures
  - Aardvark guidelines need to be followed
  - Attitudes of some participants
    - *wanting to revisit the issues of 10–14 years ago*
    - *Not aware of timeliness issue of the revision*
    - *Alternative agendas?*

# Further Information



- ❑ **The Austin Group**

  - <http://www.opengroup.org/austin>

- ❑ **The IEEE PASC Web Site**

  - <http://www.pasc.org>

- ❑ **The Single UNIX Specification**

  - <http://www.UNIX-systems.org>

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# How You Can Help?



- ❑ **To participate in the *Austin Group*, send email to**
  - austin-group-request@opengroup.org* with the word *subscribe* in the subject line
- ❑ **Visit the web site**
  - http://www.opengroup.org/austin/*
- ❑ **Participate in future meetings, expect up to two in 2001.**

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# Technical Overview

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# New Features



- ❑ **Process creation via *posix\_spawn()***
- ❑ **Sporadic Server Scheduling policy**
- ❑ **Execution time monitoring**
- ❑ **Time-outs for selected blocking functions**

# New Features



- ❑ **Enhanced threads functions**
  - barriers
  - spin locks
- ❑ **Additional realtime functionality:**
  - monotonic clock
  - synchronized clock



# New Features



- **Mandatory**
  - Sockets
  - IP v4 support
  - IP Address Resolution
  
- **Optional**
  - IP v6

# New Features



- **IP version 6**

- Overcomes the shortage of address space

- Designed for better manageability

- *Security enhancements*

- IPSEC

- *Quality of service*



## □ API Enhancements

- new functions `if_freenameindex()`, `if_indextoname()`, `if_nameindex()` and `if_nametoindex()` have been added to the Sockets Interfaces.
- New functions `getipnodebyaddr()`, `getipnodebyname()`, `inet_ntop()` and `inet_pton()` have been added to the IP Address Resolution Interfaces.

# New Features



- ❑ **The UNIX feature set is now available as an option within POSIX**
- ❑ **The new document set forms the core of the Single UNIX Specification Version 3**
- ❑ **Extended pthreads functions**

# New Features



- **ISO/IEC 9899:1999 ISO C (*c99*)**
  - New functions (esp. maths)
  - Restrict keyword

# Key Changes



- ❑ **Legacy and obsolescent features dropped**
  - Much of this was to compromise between System V and BSD
- ❑ **Job control and certain options in POSIX.1 mandated**
  - ditto
- ❑ **Corrigenda incorporated**

# Key Changes (Cont'd)



- ❑ **XTI dropped**
  - Will be retained as a separate specification but not required for POSIX or UNIX conformance
- ❑ **STREAMS optional**
  - An optional feature group for those systems that wish to support the functionality