# Versions and Tools

## Current RTEMS Releases
- 2007/03/07: rtems-4.7.0 released
- 2007/04/13: rtems-4.7.1 released
- 2007/03/13 rtems-4.7.99.1 released

## Host Toolset Versions
- For rtems-4.7.x:
  - gcc-4.1.1/newlib-1.15.0
  - binutils-2.17
- For rtems-4.8:
  - gcc-4.1.2/newlib-1.15.0
  - binutils-2.17
Host Platform News

Primary supported Host Platforms:

- Linux
- Win32/cygwin
- New: Win32/MinGW (set up and currently supported by Chris Johns, Cybertec, Australia)
Zoo Of Target BSPs

sh
  simsh4
gensh1
gensh2
gensh4
shsim

Sparc
  leon
  leon2
  leon3
erc32

hppa1.1
  pxfl
  simhppa

new rtems-4.7
rem. rtems-4.7
new rtems-4.8

i386
  go32
  pc386
  ts_386ex
  Force386
  i386ex

ColdFire
  uC5282
  mct5206elite
  av5282
  idp

M68k
  gen68302
  mrm332
  mvme162
  sim68000
  dmv152
  gen68340
  mvme136
  mvme167
  ofi332
  gen68360
  mvme147
  ods68302
  csb360
  ofi68k

Arm7/9
  armulator
  csb350
  hurricane
  rbtx4938
  jmr3904
  p4000
  genmongoos
  ev
  rbtx4925
  p4000

MIPS
  csb350
  hurricane
  rbtx4938
  jmr3904
  p4000
  genmongoos
  ev
  rbtx4925
  p4000

M68k
  gen68302
  mrm332
  mvme162
  sim68000
  dmv152
  gen68340
  mvme136
  mvme167
  ofi332
  gen68360
  mvme147
  ods68302
  csb360
  ofi68k

PowerPC
  eth_comm
  mvme2307
  score603e
  gen405
  mbx8xx
  mvme5500
  gen5200
  mcp750
  ss555
  dmv177
  motorola_ppc
  ppcn_60x
  ep1a
  mpc8260ads
  psim
  virtex

new rtems-4.7
rem. rtems-4.7
new rtems-4.8

h8300
  h8sim

TI c4x
  c4xsim

BlackFin
  ezKit533

nios
  nios2_iss
FPGA Based BSPs

Among others, rtems-4.8 offers two BSPs for processor cores embedded in FPGA

- NIOS-II (Altera)
- PowerPC/Virtex (Xilinx)

New class of devices can be designed with embedded and changeable hardware support for

- Digital Filters, Transformations
- Specialized “soft” hardware
- others...
Major RTEMS 4.7 Changes

- Efforts to reduce minimum code size
- Stack checker uses additional rule
- Speedup of FAT filesystem performance
- Classic API ADA bindings updated
  - And many more...
Major RTEMS 4.8 Changes

- Further efforts to reduce minimum code size
  - assert uses printk or BSP-specific replacement routine
- Additions to POSIX API:
  - Barriers, spinlocks, rwlocks
- Addition of nanosecond support to clock API
- Improvements of “Capture Engine” for system event tracking, adapted to nanosecond resolution
- Rework of source code structure for PowerpC exception handling
  - Transition from “copied” to “shared” code

And many more...
Funding

Some desired projects require either

- Substantial funding of one party
  or
- Shared funding of multiple parties

Candidates:

- Update of TCP/IP stack
- Addition of a proper USB stack
Infrastructure Changes

Hardware

- Better servers at rtems.org

Software Changes

- RTEMS Wiki established [http://www.rtems.org/Wiki](http://www.rtems.org/Wiki)
- Bug database switched from GNATS to Bugzilla
- Mailing lists managed with GNU mailman
- Yum/APT repository for GNU/Linux ROMs

Coming soon:

- European mirror site at [http://www.rtems.de](http://www.rtems.de)
RTEMS Training

Regular Open Classes are held in:

- Huntsville, Alabama (organized by OAR Corp)
- Munich, Germany (organized by embedded brains GmbH)

Specialized and On-Site classes available on request
RTEMS Commercial Support

Support available in:

- USA: OAR Corporation, Huntsville, Alabama
- Australia: Cybertec, Gladesville
- Germany: embedded brains GmbH, Bavaria, Puchheim
  - near munich, close to the center of Europe
General Activities

Embedded HW and SW development

Customer ranges
  - Industrial
  - Automotive
  - Telecommunications
  - Aerospace
embedded brains GmbH
RTEMS Activities

Training
BSP ports
Application support
Turn-key RTEMS environment setup for customer specific hardware
Consulting and On-Site support
RTEMS Pointers

http://www.rtems.com

- Main website with sources, tools, CVS,
- Documentation and Wiki
- Mailing list archive

http://www.embedded-brains.de/

- Products and support services for RTEMS/embedded design

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