These release notes apply to the following:

- The Remote Annex Operational Code Version R7.1
- The Annex Host Tools Version R14.2.24
- Annex Manager R1.1

Included in these Release Notes are the following topics:

- New Features
- Special Considerations
- Supported Platforms
- Known Problems/Limitations
- Problems Resolved with this Release

New Features

printer_crlf

Epson printers monitor pin 14 of the parallel port to decide how to handle CR. If pin 14 is high, the printer performs a CR. If pin 14 is low, the printer performs a CR/LF. The default value is **Y** and enables the converting of <CR> to <CR><LF>. The value of **N** disables the parameter so the printer does not add a <LF>.

Telnet Connectivity to Parallel Ports

Parallel ports now appear on the network as Annex TCP ports 5901-5999 and 7901-7999. This means that rtelnet can access the parallel ports; aprint is no longer necessary to use the parallel ports.

Forwarding Broadcasts

This release adds the Annex parameter **ip_forward_broadcast**. If this parameter is set to **Y**, the Annex forwards Network directed IP broadcasts to installed interfaces of the same network.

Default Domain

This release adds the keyword **domain** to the gateways file, and modifies the output of the CLI **hosts** command. The new gateways keyword usage is:

`domain search <path> <path...>`

This form adds a network domain to the DNS search path. The given paths are decomposed into higher-level names, and all of the forms are added. For example, **mynet.city.company.com** decomposes into **mynet.city.company.com**, **city.company.com** and **company.com**. To prevent this, you can quote a portion of the path that should not be decomposed. For example, **this."that.theother.edu**" decomposes into **this.that.theother.edu** and **that.theother.edu**. When these paths are added, the list is checked for duplicate entries (case is not significant), and the duplicates are silently ignored.

`domain default <path>`

The second form sets the default search path. This path should be set after all search paths have been added. The Annex will propagate this path to the top of the search list and remove it from all of the **hosts** entries.

The new **hosts** output is in response to the **hosts -n** option. In addition to displaying the name server data, this option now also displays the default domain and the domain search list contents.

The Annex still does a reverse address query for its domain name, and if a valid response is received, the Annex overrides the contents of the gateways file, sets its default domain and adds the decomposed response to the search list.

ACP to Work with NIS

This release adds simple support for host passwd and shadow file reading routines to erpcd. These can be selected by the use of the **NATIVEPASSWD** and **NATIVESHADOW** flags in **src/erpcd/Makefile**.

Support for 57.6Kbps

The 57600 speed will be supported only in new hardware platform with fast octart.

do_compression and allow_compression

The **slip_do_compression** and **slip_allow_compression** parameters are renamed to **do_compression** and **allow_compression**, respectively. There is no change to their meaning for SLIP. The allow_compression parameter now also applies to PPP. If allow_compression is enabled, the Annex always requests for compression and always accepts requests for compression. If allow_compression is disabled, the Annex never requests for compression, and always rejects requests for compression. The do_compression parameter is not used for PPP.

The default value for allow_compression is **N**. Be sure to set this to **Y** to negotiate for VJ compression.

Bootp over SLIP Lines

Both SLIP or PPP listen for any BOOTP packets sent by the remote device that are addressed to either the Annex address(es) [unlikely] or 0.0.0.0 or 255.255.255.255 [likely]. It then formulates a response based upon the na parameters and the input packet by examining each field. If the Server Name field is not null, the Annex tries to resolve it as a host name. If this succeeds, the Annex fills in some reasonable IP addresses in the fields and forwards the packet to that host rather than respond by itself.

DSR Signal

The use of DCD and DSR signals has been split across two parameters: **need_dsr** and **control_lines**. If the parameter need_dsr is set to **Y**, DSR must be asserted to establish a connection on a port. If the parameter **control_lines** includes **modem_control**, that is, the control_lines parameter is set to **both** or **modem_control**, DCD must be asserted to establish a connection. Separating control of these two signals provides more flexibility in the use of modem signals.

New Value for output_flow_control

The NA per-port parameter **output_flow_control** allows the new value **both**. This setting (if **control_lines** is set to **flow_control** or to **both**) enables both in-band (XON / XOFF) and out-of-band (CTS / RTS) flow control on the Annex III and Micro Annex CD180 serial communications chip. These methods of flow control are independent and have no overhead since they are handled by the CD180's hardware rather than in software.

Setting **output_flow_control** to **both** enables both of these flow control methods by default. It is then up to the user (via stty), or to TELNET or rlogin protocol to disable the XON / XOFF portion of the flow control if the remote modem is capable of out-of-band signaling, and thus does not need the in-band flow control.

Since the standard character MIB doesn't support both forms of flow control at the same time, you can't currently set this option via SNMP, and a port with **output_flow_control=both** will lie to the host and say it has hardware flow control enabled when queried via SNMP.

TCP keepalive Timers

Three new tcp_keepalive parameters have been added for the Annex, ports and printer. The Annex parameter is the default for all TCP connections to or from the Annex. The default setting is 120 minutes (per RFC specifications). It is settable from 1 to 255 minutes. This parameter is read only on boot-up, so you need to reboot the Annex if you want to change it. The port parameter is the default for TCP connections to or from a given port. If it is set to zero, it defaults to the value of the **annex tcp_keepalive** parameter.

The printer parameter is the default for TCP connections to a given printer port. If it is set to zero, it defaults to the value of the **annex tcp_keepalive** parameter.

The Annex also does 10 retries at 75 second intervals. So this time must be added to the **tcp_keepalive** setting. For example, if the timer is set to 5 (5 seconds), the maximum time would be approximately 17.5 minutes.

Year 2000 Compliance

The R7.1B release of software is Year 2000 Compliant for Micro Annex ELS. The R7.1 embedded image is compliant on a self boot only model (no host tools) or in conjunction with the R14.2.24 host tools. For more information, refer to SPR 11150 in the Problems Resolved with this Release section.

Supported Platforms

The Distribution media contains binary files for most of the supported platforms. When the script detects that there are binary files for the host operating system, it gives you the option of installing the binary files or loading the source code and compiling the software at a later time. If there are no binary files available, the script loads the source code and uses an available compiler on the host system to build the image. If the script does not identify a compiler on your system, it ends the installation session.

The operating system versions supported by Annex and the binary files that are provided on the distribution media are shown in Table 1.

Table 1 Operating System Support

Operating System	Files Available
Sun Microsystems SunOS 4.1.4	Binary files and source code
Sun Microsystems SunOS 4.1.3	Binary files
Solaris 2.5.1	Binary files
Solaris 2.4	Binary files and source code
IBM RS/6000 AIX 4.2	Binary files and source code
Hewlett-Packard HP-UX 10.20	Binary files and source code
Hewlett-Packard HP-UX 10.0	Binary files
Linux 2.0.34	Binary files and source code

Known Problems

Self-boot Annexes

A *self-boot* Annex does not correctly load its image into flash from an Annex boot server (another Annex). The Annex correctly loads its image into flash from any other host, and the Annex correctly boots from an Annex boot server.

R7.1 can not fit into half megabyte of FLASH in *self-boot* units.

Other Limitations

The NA and Admin command **set port speed 57600** produces an erroneous return when the hardware does not support that speed. Admin produces **invalid structure for parameter :speed: 7**. NA produces **Netadm error: erpc abort; invalid parameter value**.

The parameter **need_dsr** is ignored for SLIP and PPP lines.

The Annex ignores parameters after **rs232AsyncPortAutobaud** that are contained within the same SNMP Set request. The work-around is to insure that the rs232AsyncPortAutobaud set request is at the end of the set request packet or is alone in the set request.

Problems Resolved with this Release

SPR 11150 The acp_logfile is now year 2000 compliant.

The year 2000 is now displayed as "00" rather than "100". If you are not installing on one of the supported host platforms and you use the acp_logfile for accounting purposes, you should be aware that after 991231 (which represents 1999/12/31) midnight, the entry in the acp_logfile will appear as 1000101 instead of 000101. If you have scripts that use this information for accounting, you need to modify those scripts to handle this properly.

SPR.9576 Aprint now works properly.

Features Not Supported in This Release

The following list of features are not supported by the R10.0B release of software. The *Annex Administrators Guide for Unix* that is sent with this release of software mentions several features which are not present in the R10.0B software release. Some (but not all) of these features are listed below:

- PPP
- Windows NT
- Dialback
- type_of_modem (parameter)
- LP and LPD
- tstty
- tmux
- embedded RADIUS and RADIUS proxy