Tech Info Library

AppleTalk Internet Router 1.0 & 2.0: ADEV Files Question

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Revised:        2/6/90
Security:       Everyone
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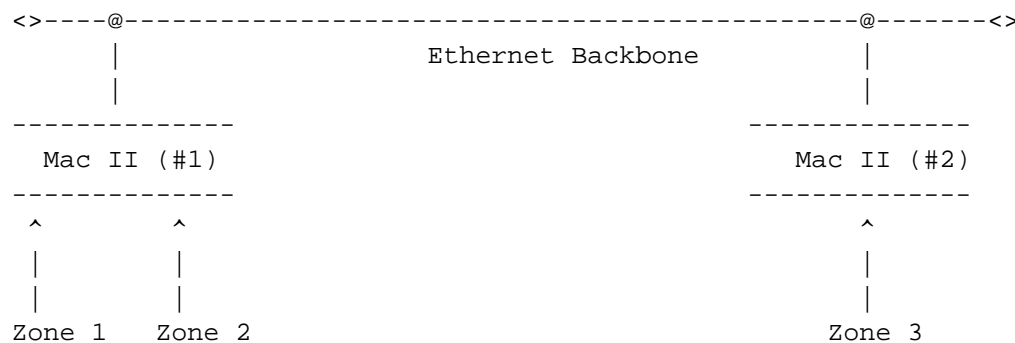AppleTalk Internet Router 1.0 & 2.0: ADEV Files Question

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TOPIC --

After installing the AppleTalk Internet Router, the following problem occurred and was solved.

Situation

There are three separate LocalTalk-type networks, each going into a Star Controller (that is, three Star Controllers) -- Zone 1, Zone 2, and Zone 3. There is also an Ethernet backbone. Two Macintosh IIs are acting as routers between Zone 1 and Zone 2 and the Ethernet backbone and Zone 3 and the Ethernet backbone.

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<>----@-----------------------------------------------@-------<>
      |                  Ethernet Backbone            |
      |                                               |
--------------                                  --------------
  Mac II (#1)                                     Mac II (#2)
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  ^        ^                                         ^
  |        |                                         |
  |        |                                         |
Zone 1    Zone 2                                   Zone 3

Macintosh II 5MB (#1)
  - System Software Version 6.0.3
  - EtherTalk 2.0
  - AppleTalk Internet Router
  - AppleShare 2.0.1
  - AppleShare Print Server

Macintosh II 1MB (#2)
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    - System Software Version 6.0.3
    - EtherTalk 2.0
    - AppleTalk Internet Router
    - AppleShare Print Server

Problem

When configuring the router in the router setup for Macintosh II (#1), four
ports appear: 1 Ethernet port, 1 LocalTalk modem port, and 2 LocalTalk built-in
ports.

The appearance of this extra "LocalTalk built-in" port is impossible and
doesn't make sense but, for some odd reason, continues to happen no matter how
many times I restarted or tried to deactivate the port. The router actually
runs in this configuration, but doesn't work properly.

Zone 1 is attached to the built-in port. However, whenever Zone 1 is chosen in
the "Chooser" (after the router came on-line), none of the network services
available in Zone 1 appear. Also, people in Zone 1 can't see any part of the
network--including their zone (Zone 1). If I shut off the routers, everyone
can see their respective zones including the Zone 1 people. Therefore, I know
there is integrity in the physical media.

Solution

Since the router setup on the Macintosh II (#2) was normal (that is, two total
LocalTalk ports (modem/built-in) and one EtherTalk port), I assumed that there
had to be something wrong with Macintosh II (#1). The only thing I was doing
different on Macintosh II (#1) was running the AppleShare File Server.

After examining the System Folders for both Macintosh IIs (#1 and #2), I found
two CDEVs that were installed by the AppleTalk Internet Router. "LocalTalk
(Built-In)" and "LocalTalk (Modem)". Since I had two "LocalTalk (Built-In)"
ports for my router setup on Macintosh II (#1), I decided to throw out the
"LocalTalk (Built-In)" CDEV system document in the System Folder for Macintosh
II (#1) and left it in Macintosh II (#2).

To my surprise, when I got into my router setup for Macintosh II (#1),
everything was normal with one "LocalTalk (Built-In)", one "LocalTalk (Modem)",
and one EtherTalk port. When I restarted both routers, the whole network
started up, and everyone could see everything in the network -- including Zone
1.

Questions
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1) Why did this happen, and why did the solution work?

2) Why do you need a CDEV for "LocalTalk (Built-In)"? I thought that code
   was an integral part of the system (ROM or on some other chip).

3) If "LocalTalk (Built-In)" is not an integral part of the system, why
   haven't I ever seen a "LocalTalk (Built-In)" CDEV in the System Folder?

4) Does AppleShare File Server install some of its own resources that may
   cause conflicts with the AppleTalk Internet Router "LocalTalk
   (Built-In)" CDEV? This would explain why the Macintosh II (#2) didn't
   have any problems with the "LocalTalk (Built-In)" CDEV installed while
   Macintosh II (#1) did have problems.

DISCUSSION --

1) The AppleTalk Internet Router 1.0 beta software (AppleTalk Phase 1 only)
   installs the files:

   - Modem LocalTalk
   - Printer LocalTalk

   in the System Folder.

   The AppleTalk Internet Router 2.0 installs the files:

   - LocalTalk (Modem)
   - LocalTalk (Printer)

   in the System Folder. These four files are ADEVs, not CDEVs.

   If the AppleTalk Internet Router 2.0 software was installed on a machine
   that had the AppleTalk Internet Router 1.0 beta software installed, you
   would have the "Printer LocalTalk" file from the AppleTalk Internet
   Router 1.0 beta software and the "LocalTalk (Modem)" and "LocalTalk
   (Printer)" files from the AppleTalk Internet Router 2.0 software in the
   System Folder.

   The AppleTalk Internet Router 2.0 installer script removes the "Modem
   LocalTalk" file from the System Folder, but does not remove the "Printer
   LocalTalk" file. This is why the router setup window shows the two
   LocalTalk printer ports and the LocalTalk modem port.

   The router did not work properly because both LocalTalk Printer
   port drivers were telling the printer port different things, which, in
   turn, caused the network problems. When you removed the "LocalTalk
   (Printer)" file, the AppleTalk Internet Router 2.0 software had only one
   driver talking to the printer port, and the problems stopped.

   It is important to note that the "LocalTalk (Modem)" and "LocalTalk
   (Printer)" files from the AppleTalk Internet Router 2.0 software should
   be in the System Folder, and the "Printer LocalTalk" file from the
   AppleTalk Internet Router 1.0 beta software should be removed.

2 and 3) The AppleTalk Internet Router requires special LocalTalk drivers
   and uses RAM-based drivers instead of the ROM-based drivers. This is why
   you have not seen these files before.

4) The AppleShare File Server and AppleShare Print Server software
   does not conflict with the AppleTalk Internet Router software.

(NOTE: Apple Tech Comm recommends that the Macintosh II (#2) router have 2MB
RAM installed, since it is running the AppleShare Print Server software in
conjunction with the AppleTalk Internet Router.)

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