

# Applied Computerized Telephony (ACT)

## Technical Data

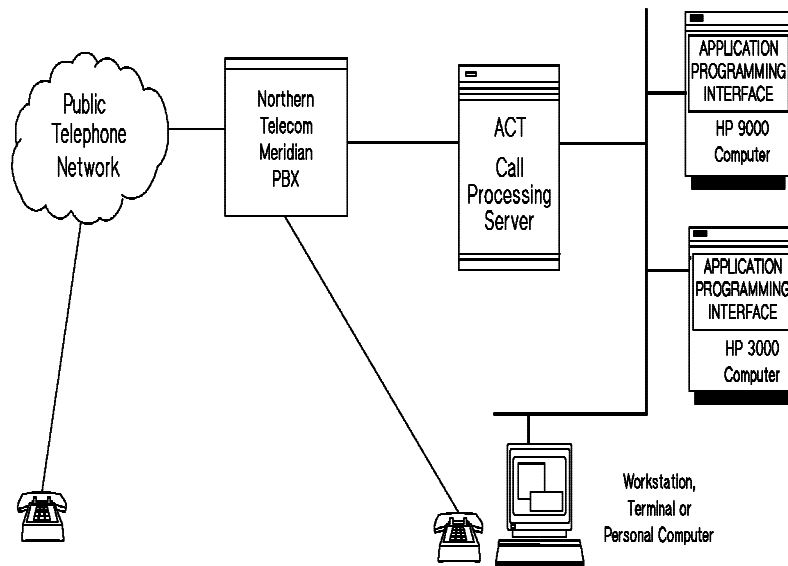
**HP 32044A ACT-CP Server**  
**HP 32046A ACT API-HP 9000**  
**HP 32077A ACT API-HP 3000**

### ACT Call Processing Products for NT Meridian 1 Private Branch Exchange

An exciting new generation of applications leverage the integration of voice and data technologies to increase productivity and revenues. The advanced call processing capabilities of Northern

Telecom Meridian 1 PBX can now be combined with the open application environment of HP computers via intelligent computer-to-PBX interfaces. The resulting benefits are especially suited to telephone intensive environments such as customer service/support and telemarketing. Hewlett-Packard addresses these customer needs with the

Applied Computerized Telephony (ACT) Call Processing products. The ACT Call Processing Server is a server that interfaces and manages communications between the PBX and HP computers. ACT Application Programming Interfaces (APIs) facilitate the integration of the new ACT capabilities into new and existing computer applications.



### Features

Applications, both HP 3000 and HP 9000 computer-based, utilize the ACT Call Processing Server and an ACT Applications Programming Interface (API) to provide the following types of capabilities:

#### Inbound Call Information

Information passed from the telephone network to the PBX, such as the originating caller's telephone number and the number that was called, is passed to computer applications. Applications can

then identify the caller (by their calling number) and the purpose of the call (from the telephone number that was called), and automatically deliver caller information and data specific to the purpose of the call to a terminal or workstation simultaneously, as the telephone rings.

### Computerized Call Processing

Commands passed from computer applications instruct the PBX to perform call processing functions, such as make a call, disconnect a call, or transfer a call. This allows intelligent call routing based on inbound call information, and automated dialing from numbers in a computer database.

### Outbound Calling

ACT increases productivity in outbound calling environments. With automated dialing applications, agents go from call to call, and avoid manually dialing numbers and listening to busy signals and unanswered ringing. This results in substantial increases in agent productivity.

### Industry-Specific Applications

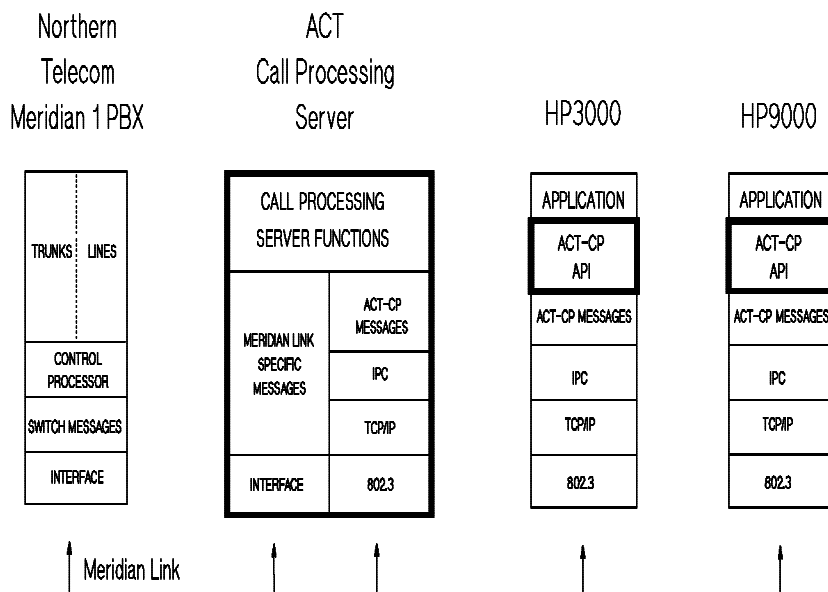
ACT provides a toolset that customers can use to enhance the capabilities of their existing applications. This toolset has also been used by numerous independent software vendors who offer custom applications for specific industries. Software vendors with applications for the financial services, distribution, customer service, and catalog sales industries

have applications that utilize ACT. For a complete list of these software vendors who have ACT compatible products contact your local HP Sales Office.

### Functional Description

Command and status information is passed between HP computers and the PBX over an intelligent messaging interface. Computer applications use the ACT Call Processing Server and APIs to originate, answer, and manipulate telephone calls.

The Call Processing Server interfaces to the PBX and invokes the required function as requested by the client applications. The server tracks telephone call status information in the PBX, session status information in the computer applications, and makes the logical association between the telephone call and terminal session at the desktop.



Standard IEEE 802.3/Ethernet and TCP/IP networking are used for communications between the host applications and the ACT Call Processing Server. The API software modules utilize industry standard interprocess communications to exchange messages with the Call Processing server.

Applications Programming Interfaces (APIs) are available for HP 9000 and HP 3000 computers to facilitate applications development. The

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APIs format application requests into ACT messages and communicate with the PBX via the ACT Call Processing Server. The server architecture is an implementation of Hewlett-Packard's Client-Server computing strategy, allowing multiple computer applications to utilize a single server to communicate with the PBX. Various telephone switch manufacturers provide proprietary messaging interfaces on their switches. Customer premise switches, known as Private Branch Exchanges (PBXs) and Central Offices (COs) are being equipped with these switch-to-computer interfaces. Standards committees are currently working to evolve these proprietary interfaces into a single industry standard. Hewlett-Packard will adhere to these standards as they are developed.

### **ACT Call Processing Server**

The HP 32044A ACT Call Processing Server manages sessions between multiple computer applications and the call processing features of the PBX. Information received from the PBX, such as the telephone number of the incoming caller or station status, is passed to specific computer applications. ACT messages originating from computer applications are converted to PBX specific messages in order to invoke the required functions, for example to make a call or transfer a call.

The HP 32044A ACT Call Processing Server has been architected to interface with the Northern Telecom Meridian 1 line of PBX's. Other HP Technical Data sheets describe additional telephony switches supported by ACT.

### **Application Programming Interfaces (APIs)**

The ACT APIs are designed to provide a simple means for the application programmer to incorporate call processing functions into their applications. The API also shields the programmer from the complex PBX dependent communication procedures and protocols. The APIs consist of sets of callable subroutines, such as Make Call, Connect Call, Hold Call, Conference Call, Answer Call, Event Monitor, and Drop Call. The APIs facilitate application development by providing an easy to use set of callable intrinsic for the application developers, shielding them from the detailed workings of a specific vendor's PBX. The APIs also protect your application investment by buffering the application from minor technical changes in PBX interfaces.

### **ACT Product Requirements**

#### **PBX**

HP 32044A Option 101 is the ACT Call Processing Server designed to interface with the Northern Telecom Meridian 1 line of PBXs. These PBXs must be equipped with the Meridian Link Module and Automatic Call Distribution (ACD) software. For specific PBX application configuration requirements, Northern Telecom or an authorized distributor should be consulted.

#### **Application Platform**

The computer requirements include the appropriate ACT API software and ThinLAN interface for server communications.

On HP 3000 systems, order the HP 36923A ThinLAN 3000 Network Link, which includes the necessary TCP/IP and Net/IPC software.

On HP 9000 systems, Berkeley Sockets is required along with the appropriate LAN link for the 300, 400, 700 or 800 Series processors.

Consult your local HP Sales and Service Office for specific requirements for your system.

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## Installation Services

The ACT Call Processing Server and Application Programming Interfaces (APIs) are customer installable. If a customer would like assistance in the implementation of ACT, a full range of consulting services for ACT Call Processing products is available. These ACT Consulting services include:

### ACT Assessment

HP will work with you to determine the best way to use ACT in your specific environment. HP will work with your telecom staff, MIS staff, and your other suppliers to assess your current environment and develop a detailed report of the required computer hardware/software and telecommunications equipment for an implementation of Applied Computerized Telephony.

### ACT Project Management

Successfully implementing the infrastructure for an ACT Application requires careful coordination of resources from computer vendors, telephone switch suppliers, public telephone network service providers, and software applications providers. HP will develop and coordinate execution of a detailed schedule of tasks that is required for your ACT installation.

## ACT Application Assistance

The first step in creating an effective voice/data application is to design it properly. ACT trained HP personnel will work with your application program developers to assist them in creating a new ACT application, or in modifying an existing application. HP can develop a phased implementation plan where the simpler aspects of ACT, such as using the originating caller's telephone number to automatically retrieve customer file information, can be initially implemented. Later, more advanced ACT capabilities, such as high volume outbound calling, can be integrated into the application.

### ACT Ongoing Support

After your successful ACT installation, Hewlett-Packard will provide day-to-day technical support of your ACT installation. The ongoing technical support of an ACT application requires a close working relationship with software, computing, Telephone Switch, and public network services vendors. ACT Ongoing Support will provide you with fault isolation and problem management within your multivendor ACT installation.

All HP ACT Consulting Services are subject to local availability.

## Ordering Information

### ACT Components Summary

- **HP 32044A**  
ACT Call Processing Server for Northern Telecom Meridian PBX  
**101** Preconfigured Server
- **HP 32046A**  
HP 9000 ACT Call Processing API
  - AHO** For Tier 1 SPUs
  - AEL** For Tier 2 SPUs
  - AE5** For Tier 3 SPUs
  - AE6** For Tier 4 SPUs
  - AEN** For Tier 5 SPUs
  - AEP** For Tier 6 SPUs
  - AH1** For Tier 7 SPUs
  - AEQ** Series 300 Processors
  - AHL** Series 400/700 Processors
- **HP 32077A**  
HP 3000 ACT Call Processing API
  - 310** For Tier 1 SPUs
  - 315** For Tier 2 SPUs
  - 320** For Tier 3 SPUs
  - 330** For Tier 4 SPUs
  - 335** For Tier 5 SPUs
  - 340** For Tier 6 SPUs
  - 350** For Tier 7 SPUs

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## Product Support

### Software Support

#### *Response Line*

- **ACT Server (H2087A+H00)**  
# 101 Northern Telecom PBX
- **HP 3000 APIs**
  - #200 Low-End MPE XL
  - #201 Mid-Range MPE XL
  - #202 High-End MPE XL
- **HP 9000 APIs**
  - #300 Series 300/400
  - #301 Low-End S800
  - #302 Mid-Range S800
  - #303 High-End S800

#### *Basic Line*

- **ACT Server (H2088A+L00)**  
#101 Northern Telecom PBX

## Hardware Support

- **Priority Plus (24 Hours)**  
ACT Server (32044A+02G)
- **Priority (8 a.m.-9 p.m.)**  
ACT Server (32044A+02A)
- **Next Day (8 a.m.-5 p.m.)**  
ACT Server (32044A+02C)
- **Scheduled**  
ACT Server (32044A+02L)
- **Installation**  
ACT Server (32044A+17A)  
HP3000 API (32077A+17A)  
HP9000 API (32046A+17A)
- **Software Update Service**  
ACT Server (H2089A+S00)  
#101 Northern Telecom PBX  
#AA0 1/4-inch Tape

### Multivendor Network Support

- **NetAssure**  
ACT Server (32044A+16B)  
Northern Telecom PBX  
(50052P)

### Consulting

- **ACT Assessment**  
HP ConsultLine  
(H2355A Module N)
- **ACT Project Management**  
HP ConsultLine  
(H2355A Module 9)
- **Application Assistance**  
HP ConsultLine  
(H2405A Module N)

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