

Title: Public Personal Handy-Phone System : Service Specifications of
Basic Services

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1 Bearer Services

Bearer services supported by PHS provide information transfer capability on common radio interface and involve low layer functions. The user may choose high layer protocols for his communication, and the network does not ascertain compatibility at these layers between users.

The following bearer services are currently identified.

- Circuit-mode 32 kbit/s bearer service for speech information transfer

Transmission function for voice communication ; 32 kbit/s ADPCM CODEC is inserted.

- Circuit-mode 32 kbit/s bearer service for 3.1 kHz audio information transfer

Transmission function for 3.1 kbit/s bandwidths communication; 32 kbit/s ADPCM CODEC is inserted.

- Circuit-mode 32 kbit/s unrestricted bearer service

Unrestricted information transmission function at 32kbit/s with bit transparency

- Circuit-mode 64 kbit/s unrestricted bearer service

Unrestricted information transmission function at 64kbit/s with bit transparency

Service attribute values of bearer services for PHS, at present, are summarized in Table 1-1/B-SV1.00

Table 1-1/B-SV1.00 Service attribute values

Service attribute	Values
Information transfer capability	Speech, 3.1kHz audio, Unrestricted digital information
Information transfer mode	Circuit
Information transfer rate	32 kbit/s, 64kbit/s (Unrestricted digital information only)
Communication configuration	Point-to-point

2 Teleservices

Teleservices provide the full capability for telecommunication and involve both low layer and high layer functions. A teleservice supported by PHS should use bearer capability(ies) defined in sub-clause 1.1.

Teleservices for PHS are not currently specified (FFS).

3 Provision of PHS Service

The PHS service will be provided by pre-arrangement with the PHS service providers and/or other service providers.

The following conditions may be required for the arrangement of PHS service provision to user;

- User may subscribe to basic services and possibly supplementary services.
- Special arrangement may be required for originating and/or terminating call from public PS.
- PHS service provider may not provide all subscribers with originating and/or terminating call from public PS.
- Services may be restricted in some situation.

4 Basic Call Handling Functions to Provide Basic Services

4.1 Location Registration

Location registration is a feature by which the identity of public PS used for outgoing and incoming call by PHS subscriber is registered to network. The identity of public PS is used to deliver calls for the PHS subscriber to the registered PS.

- Location registration associates a location registration area identity with an identity of public PS.
- In the location registration procedure, previous location registration information may be erased.
- Authentication should be executed at each location registration.
- In case of roaming, the terminal and/or user profile is transferred from the home network to the visited network by the request of initial location registration in the visited network.

4.2 Outgoing Call

Outgoing call is a feature by which a PHS subscriber can make a outgoing call from public PS; the outgoing call request includes a number identifying the called user. This request is given to the network en bloc including all the required information. Authentication should be executed at each outgoing call.

4.3 Incoming Call

Incoming call is a feature by which incoming calls to a PHS subscriber are presented at the terminal address; the incoming call request includes a number identifying the called user. This feature is provided to public PS which previously completed location registration. Authentication should be

executed at each incoming call.

4.4 Routing

This feature enables a call to be routed to an exchange controlling a call, where a called party's terminal visits, according to routing address derived from the location information.

4.5 Paging

Paging is a feature that pages the PS in the location registration area based on the stored location information, and determines the visited cell by the response from the PS. When several CS are equipped within a location registration area, paging to all the CSs in the area simultaneously can be considered.

4.6 Call Clearing

Call clearing is a feature by which a call, bearer and network resources are released. The call may be released by either or both of the users. The call clearing may be forced to be initiated irrespective of user's intention.

4.7 Authentication

The authentication is a feature by which the validity of PS is confirmed. Authentication should be executed at each location registration, outgoing call and incoming call.

When a PS requires of the network to access it, the network requests to the PS to execute authentication. After the network confirms the validity of the PS, it sends the message indicating acknowledgment to the PS, and the PS is allowed to access the network.