The HiPath Positioning System for mobile subscribers

HPS V2.0 supplies precise location information about all DECT telephones connected to HiPath Cordless Enterprise, the integrated cordless solution for the HiPath 4000 communication platform.

After HiPath Cordless Enterprise Data Access, for the integration of data terminals, HPS represents the second major extension to the integrated HiPath 4000 cordless solution.
In addition to supporting high-performance mobile terminals for voice and data communication in configurations with up to 48,000 stations, the system now features an option for locating cordless handsets.

Why Positioning?
Positioning systems provide a new set of options for coordinating mobile personnel on large company campuses.

The number of applications are wide and varied:
- Location-specific deployment of operating technicians or security personnel.
- Automatic identification of trouble report origin, thereby eliminating the need to query and search building control systems.
- Positioning of mobile callers in a service management center on connection to an agent so that location-specific information can also be forwarded to the agent.
- Coordination of transport services, for example, forklifts.
- Easier supervision of work on large systems, such as baggage handling systems in airports.
- Rapid screen-based tracking and guiding of staff and vehicles on construction sites.
- Cross-ward deployment of nursing staff in hospitals.
- Supervision of invalids, for example, in residential homes for the elderly.
- Tracking and guiding external visitors to your company.

Staff working in hazardous areas can be protected by using positioning systems and terminals with automatic alarms.

DPS provides communication, positioning and protection in a single system.

With DPS, money savings can be made on the investment and during operation. Personnel and vehicles can be deployed much more efficiently by avoiding unnecessary routes. This also saves time and money. DPS also increases employee motivation because multiple tasks can be performed in a single operation. This strengthens personal responsibility and improves quality.

Positioning Applications

**SPS Locator**
The SPS Locator is used as a terminal for entering location requests and for displaying location results on a map representation of the relevant area.

**HiPath Personal Alarm System**
HPS can also be used as part of a personal alarm system or in other alarm scenarios. For more information about such applications in the DAKS sector, please consult the datasheet “HiPath Personal Alarm System (A31002-G2100-A300^-7629)”.

Customer-Specific Applications
If you would like to connect up an application of your own, for employee assignment planning, for example, we will be happy to provide you with the specification for the XML interface of the Location Manager.

**Location Manager**
A Windows server is used as the Location Manager. This server records location requests and converts feedback from the communication system into location information. The Location Manager is connected to HiPath 4000 and HiPath Cordless Enterprise via CAP or DAKS. It is also possible to providing positioning information on corded telephones using an appropriate database.

**DAKS**
To also permit telephone-triggered positioning, for example, following an alarm, the digital alarm and communication server (DAKS) is implemented as the interface between the Location Manager and HiPath 4000.

Positioning requests can therefore be initiated by an alarm or a telephone call and the result can be output via an announcement or display message.

DAKS is connected to the Location Manager over a LAN. It is connected to HiPath 4000 in the usual manner over an S0 or S2 line. Standard DAKS functions, such as conference control, alerting and text messages are naturally still available.

HiPath Cordless Enterprise
The communication system sets up the connection to mobile DECT clients and supplies HPS with the base station data. This data is used to locate the current position of the person using the device. All cordless telephones can be located in this way.

The device uses field strength values measured at all base stations to achieve positioning accuracy levels of between 8 and 15 m for Gigaset S2 professional, Gigaset SL1 professional, and Gigaset M1 professional handsets.

The current base station location is reported as a result for all other operational DECT telephones.

Measurements are performed within 10 seconds.

System Requirements
HPS runs on HiPath 4000 V1.0 with HiPath Cordless Enterprise V2.3. The base stations must be connected over the SLC24 board. HPS also supports networked cordless systems. These are connected via CAP V3.0 or DAKS V2.1. Calibration is essential before the system is started up. To do this, appropriate map material must be imported and on-site line-up must be performed. Development services are available on request for connecting up customer-specific applications. For more information, contact Siemens Sales.

Technical Data
- Number of administrable stations: max. 100,000
- Requests per minute: max. 250
- Max. time to locate:
  - < 5 seconds in call status
  - < 10 seconds in idle status
- Accuracy: 8 to 15 m (depending on base station density)
Applications
SPS Locator
Personal alarm system
Customer-specific applications
via XML

LAN

Message with location information

HiPath 4000
HiPath cordless Enterprise

Alarm

DAKS = Digital alarm and communication server
Our strengths - Your advantages

Siemens is known worldwide as a trailblazer in the advancement of information and communication technologies. No other company offers such a comprehensive and innovative product portfolio. Regardless of which communication technology you are using today – or want to use tomorrow – Siemens offers you the right solution.

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