# Schindler PORT Destination Control

**Schindler Lifts Australia Pty Ltd**
National Technical Support & Training

## Basic Design & Functionality of PORT Technology

- The Schindler PORT Destination Control System can be used not only on Schindler branded lifts but also on many types of third-party lift systems (usually utilised prior to the modernisation of the existing equipment). This is achieved either through a Car Call Interface Box (configurable parallel Inputs/Outputs + LON interface as required), Arcnet Server Interface or Serial Interface (RS232/RS422).

- The PORT system utilises devices called PORT Technology Gateways (PTG's/PTDB3's) for each controller, which has a LINUX operating system for the PORT program. These PTG's are individually programmed and configured specific to the lift according to the site conditions. There are over 60 standard adjustable PTG parameters to allow for the customisation of the required building setup.

- Used in conjunction with the PTG/PTDB3 is the Jobmanager – a component of the PORT program used to configure "how" the lifts respond to the PT Gateway. This sets tasks, various timings and features such as anti-nuisance operation etc. There are over 65 standard adjustable Jobmanager parameters to allow for the customisation of the required building setup.

- The landing panels are called PORT's – **P**ersonal **O**ccupancy **R**equirements **T**erminal. Currently there are at least 9 varieties of terminals that can have many variations and configurations of security card readers. These terminals are also specifically and individually programmed according to site specifics (floor and position) and customer requirements (customised themes, timings etc.). Each Terminal contains a processor with LINUX based operating system, touch screen, motion sensor, security card reader interface and site-specific configured card readers (depending on type of access cards used). These card readers may also contain Bluetooth technology. There are over 100 standard adjustable PORT parameters to allow for the customisation of the required building setup. Newer versions of terminals may often require the site core software to be at current version PORT software installed to ensure full compatibility.

- Designation Plates with audio and LED indication are used for lift car identification and DDA compliance. These can be Schindler standard product lines or customised by the client.

- At the lift car, Destination Indicators are supplied and fitted in the door jambs to show lift call allocations. They may be an LCD PDI (PORT Destination Indicator) which can have a customised theme to show allocations and audio function or a DOT Matrix style Destination Indicator.

- MyPORT – is a new application that is available to all users, visitors and the general public in any building with myPORT enabled elevators (PORT third-generation or later). With the downloaded app in the foreground, users can simply approach the elevator group and once close enough, the app will display the destination floor list of any public accessible floors. MyPORT – in Guest mode is available for free for the end user on the App Store.

- The PTG's, PTDB3's, PDI's, customer PC's and Terminals are network devices and hence interconnected by an ethernet network. This means each device has a unique identification and Internet Protocol (IP) address.

- Also added to the network are commercially available Servers with a LINUX operating system which is for the storage of the individual Building/User data and site-specific configuration.

- The Building Management and Technician interfaces to the PORT DCS are commercially available PC's (currently DELL) using a Windows Operating System with the Licenced PORT Technology Program (software) installed.

- For access control, PORT Technology can be used as a stand-alone access control for the lifts or can be configured for a High-Level Interface (HLI) to many types Base Building Access Control Systems. This is achieved by an ethernet connection and a specifically configured Hardware Firewall in some instances.

- Schindler liaises with many Security companies for continuous development and support of the High-Level Interface to Base Building Security systems. There are over 15 different HLI Interfaces with various security systems used in Australian sites.

- The current HLI general consists of 3 components;

    - Database importer – Add of user which includes the users access rights and individual User configuration with templates + users' actual credential.
    - Live Reporting - reporting of Users' movements within the building
    - Call Interface - securing/de-securing of lift floor access and emergency Recall functions.

- There is continuous development of the PORT technology card readers to read a wide range of cards, Bluetooth and NFC technologies often involving hardware and firmware customisation to suit building and tenants needs.

- Plug-ins are often used to adapt card numbers and allow some 3rd parties to work when a new card is introduced to site.

- Control of Turnstiles can be achieved by different methods these may be;

    - Full control using PORT Terminals and card readers on both entry and exit to signal gates to open;
    - Partial control where the PORT Terminal and card reader is used to send card data to Base Building Security system which then signals gates to open or a Base Building card reader is used and the PORT Terminal can direct the User to their allocated lift if an automatic destination is programmed to the User.
    - Partial control where Call Interface is used for call allocation to the PORT terminal situated in the implicit lane.

## Development of Schindler PORT Technology

- As the PORT System utilises processors, servers, PC's, ethernet connectivity and other equipment, which is constantly evolving, Schindler is constantly upgrading and evolving PORT Technology devices and importantly the PORT Technology software to suit both new and existing hardware, customer requirements and expectations.

- In recent years, a new format of the PORT Technology Software has been introduced. This includes a new User Interface, additional Parameters & settings which further improve the efficiency of the lift system and flexibility.

- A new set of APIs (Interfaces) is currently being rolled out under the Schindler 'CoLab' release for Port Technology. These will replace the current interfaces in use mentioned earlier in this document. These use the current industry standard 'REST' protocol that most 3rd party developers are now working with

  Developers can be given access to our Developer Portal web site for full information of the new API. There is also a 'sandbox' environment to test against. Also, local support also available with simulators, questions and testing.

### Building Management Access

- The Building Manager has tag reader and/or Management Log-in to access the PORT user Interface and to enrol cards that are supported, or enrolment of cards via the HLI from base building security system.

- The PORT program:

  - It has a lift monitoring function – Lifts Overview, which can be used to monitor the status of the lifts, remove lifts from service, open/close doors and activate/deactivate Special Operating Modes.

  - It can set lift floor access times (Time Patterns) which may be different from individual floors to individual floors (Zone Transitions).

  - Enter Company profiles/Master Groups.

  - Set up User templates and access profiles.

  - See/Apply User Access requirements, special requirements as necessary and access card details (if Base Building HLI is not used).

  - Setup the segregation of User Groups and Transfer Rules.

**Commissioning Technician Access**

- This is a password restricted access for the use of trained PORT Commissioner/Technician.
- Required for the initial configuration of the program to suit the individual building configuration such as name, address as well as lift numbers, types, floors served, access zones, door times, transfer times, type of card readers used, High Level Interface (if used) etc.
- This access allows for the setup and commissioning of PORT Technology devices such as the PTG's, PORT Floor Terminals, Servers, PC's etc. either on initial commissioning or replacement of the components.
- Customise PORT Floor Terminal themes, this can include tenant's logos and special floor buttons.
- Write Special Operating Modes (SOMS) according to specific Building Management Requests.
- Setup of the PORT Technology Network such as IP and UDP.
- Access to Software upgrades for any PORT devices, servers and PC's.
- There is also direct remote support available from Australian PORT Specialist and R&D, Head Office Switzerland.

## PORT Technology Support & Training Structure

Schindler PORT Technology is a powerful, flexible and highly customised Destination Control System. Schindler Australia has invested in a large amount of resources into ensuring we have a highly trained network of Technicians and support team specialists to cover Installation, Modernisation and Maintenance. This ensures Schindler can provide local expert knowledge to all customers.

If requested, the Local and Head Office PORT Technology support teams as well as R&D in Head Office Switzerland can have remote access to sites' PORT Program in a secure manner which allows for quicker response to any issues or support of Building Management.

The Local and Head Office PORT Technology support teams have access to a range of spare PORT components, servers, PC's in use and the necessary images and licencing capability for a quick turnaround in case of an issue.

## Support Structure

### Branch Level

- First Level – Site Service Technicians, this allows for day-to-day fault finding, component replacement and setup as well as parameter adjustment.

- Second Level – Modernisation & New Installation PORT Commissioning Specialists which allows for network, component setup and testing and site-specific customisation of PORT Technology.

- Third Level – Technical Support, PORT Technology Specialists allowing for Branch Level Technical Support and Training, programming of interactive systems such as High-Level Security Interface setup.

### Head Office Level

- New Technology Team, PORT Technology Specialists who have direct contact with Schindlers' Transit Management Group (R&D) and access to the TMG On-Line Product Support.

- Support of High-Level Security Interface system development with third-party base building security companies.

- Use of other specialised diagnostics programs which are additional to the PORT Software to gather data if any issues arise. This requires specific knowledge and training to interrogate the system log files to investigate any issues if they arise. This data may also be passed onto the Transit Management Group R&D team for analysis and rectification. In addition, reports can be run from site data to analyse system performance and note areas of improvement where needed – this information is often passed to TMG R&D as well.

- Provide high level training in PORT Technology network systems, PORT component configuration and HLI configuration.

- Support of the 3rd party interface development (current and new API from CoLab) at a head office level with access to R&D for further support.

## Training Structure

### Branch Level

- Level 1 PORT Technology Maintenance Training Course for Service Technicians conducted by Branch PORT Specialist.
- Level 2 PORT Technology Configuration for Modernisation & Installation Tuners conducted by Branch PORT Specialist.
- On-Line training modules are available and can be done at anytime by Schindler Technicians.

### Head Office Level

- Advanced PORT Technology Training Course for Branch PORT technology Specialists conducted by Head Office New Technology Team on an annual basis.
- As part of the Apprentice Training Program, Apprentices are given the opportunity to attend the Australian Head Office Training Facility for PORT Technology specific Training over a 3-month period.