



Facility Monitoring System (FMSNet)



HPC600



PoE Ethernet



RPC200



Introduction

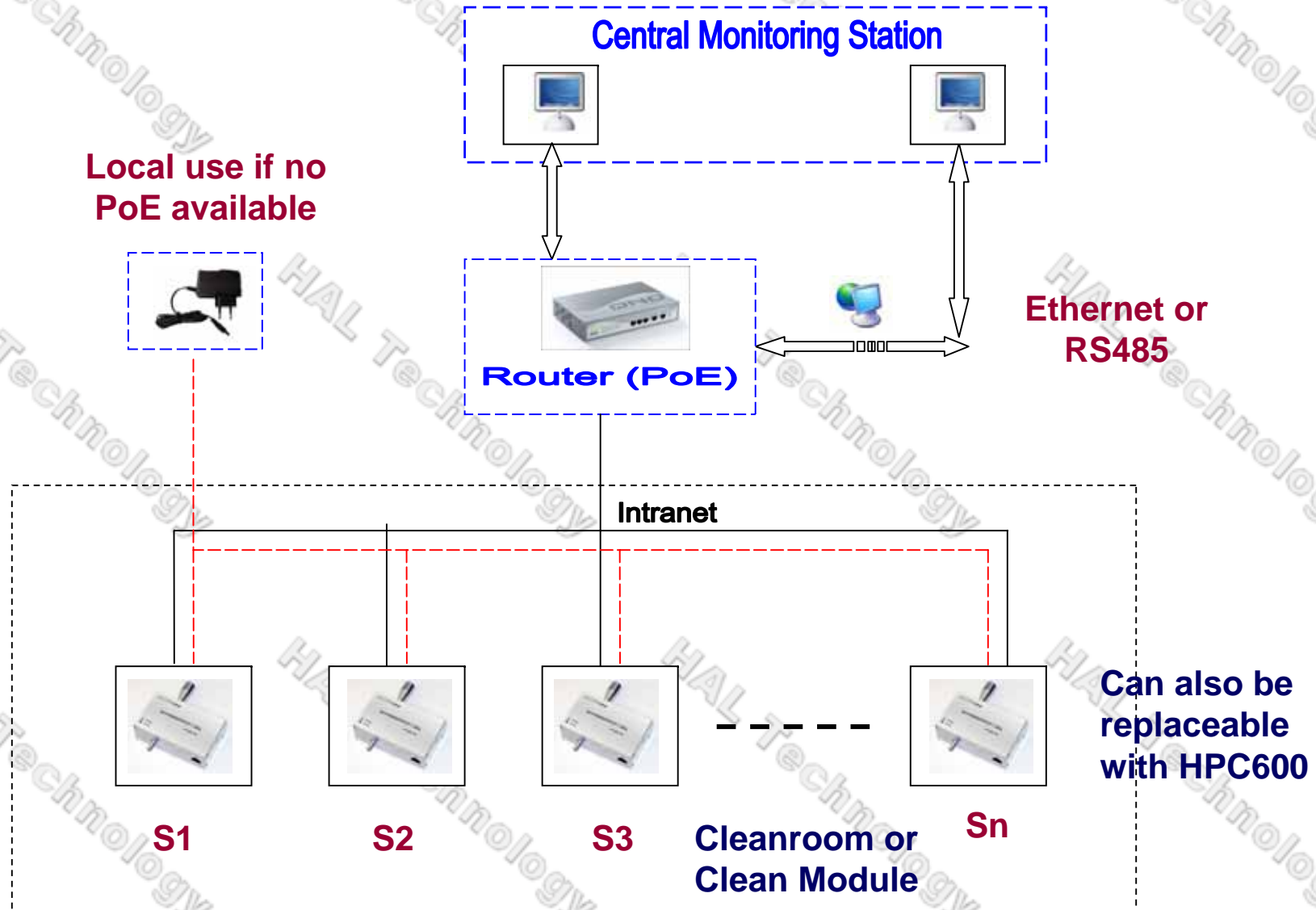
FMSNet is a remote control software developed by Hal Technology (HalTech) to support Hal Technology's clean facility monitoring devices or instruments. HalTech provide unique configurations of facility monitoring systems for 7/24 continuous monitoring clean environments.

Power over Ethernet provides the ability to detect attached powered devices (PD) and deliver 48 VDC to the PD via existing CAT5 cabling. The PoE devices are fully compliant with the IEEE 802.3af power over Ethernet standard. By default, the PoE switches discover and provide power to IEEE-compliant PDs.

HalTech's Solutions for Cleanroom Facility Monitoring

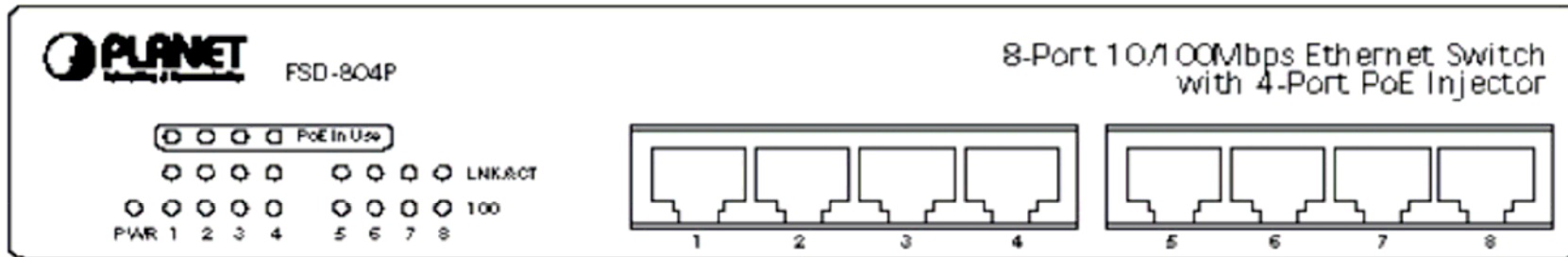
- Hal-HPC600 six-channel handheld hybrid particle counter can be operated in a multi-point internet/Ethernet wired system without need of extra vacuum sources.
- Hal-RPC200 two-channel remote particle counter can be operated in a multi-point internet/ethernet wired system with Power_over_Ethernet support
- Hal-RPC201 two-channel remote particle counter can be operated in a multi-point serial communication system

Typical HaTech Facility Monitoring System



FSD804 8-channel PoE Fast Ethernet Switch/Router

Front Panel

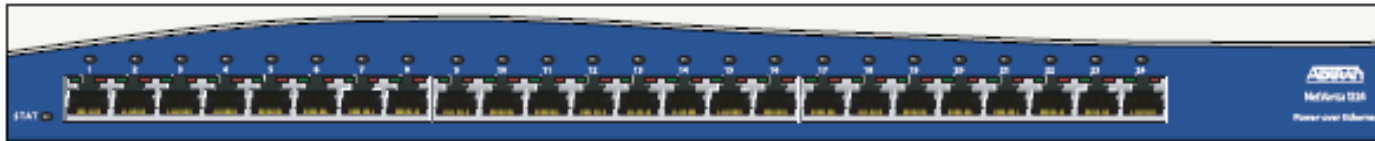


Rear Panel



The FSD-804 is able to support power to 4 IEEE802.3af compliant powered devices. 8-Port RJ-45 for 10/100TX 4-Port with PoE injector function

24-Channel PoE Switch/Router

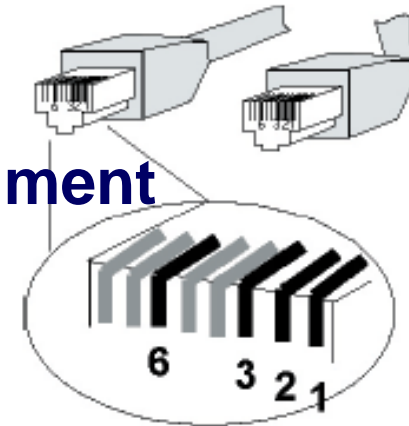


Front



Rear

RJ-45 Receptacle/Connector Pin Assignment



RJ-45 Connector pin assignment		
Contact	MDI Media Dependant Interface	MDI-X Media Dependant Interface -Cross
1	Tx + (transmit)	Rx + (receive)
2	Tx - (transmit)	Rx - (receive)
3	Rx + (receive)	Tx + (transmit)
4, 5	Not used in standard and +48V for PoE	
6	Rx - (receive)	Tx - (transmit)
7, 8	Not used in standard and -48V for PoE	

Advantages of HalTech System Solution

- Unique Ethernet communication system with convenient power
- Simple system configuration and easy installation
- Flexible and scalable system
- No extra power supply needed with PoE option
- Alarm setting and notifications
- Compatibility with major manufacturers

Overview of FMSNet Software

The screenshot displays the FMSNet v1.00 software interface. At the top, there is a menu bar with 'File', 'Tools', 'User Control', 'View', and 'Help'. Below the menu bar is a toolbar with icons for 'Start All', 'Stop All', 'Setting', 'Print', 'Delete', and 'Help'. The main area contains three tabs: 'Clean Room Map', 'History Data', and 'Real-time Graph'. The 'History Data' tab is active, showing a table with the following columns: Equipment, IP Address, Port, Position, Launch Delay, Test Time, Testing times, Interval, Standard, Class, Mode, and Run Instance. The table contains two rows of data:

Equipment	IP Address	Port	Position	Launch Delay	Test Time	Testing times	Interval	Standard	Class	Mode	Run Instance
<input type="checkbox"/> 1	192.168.1.178	21	A01	00:09	00:01:00	1	00:00	0	1	Cumulative	
<input type="checkbox"/> 2	192.162.0.1	21	B01	00:09	00:01:00	1	00:00	0	1	Cumulative	

The Windows taskbar at the bottom shows the Start button, Internet Explorer, Introduction of FMSNet, and FMSNet v1.00. The system tray on the right shows the Desktop icon and the time 0:36.

Setting Menu

Set system parameters

Options

Base Options Advanced Options Communicate

Position: B01

IP Address: 192.162.0.1 Port: 21

Launch Delay: 00:09

Test Time: 00:01:00

Interval: 00:00 mode: Counts/Liter

ISO CLASS 1

FED 1

Add Modify

Options

Base Options Advanced Options Communicate

Position: A01

0.0 1

0.0 1

0.0 1

0.0 1

0.0 1

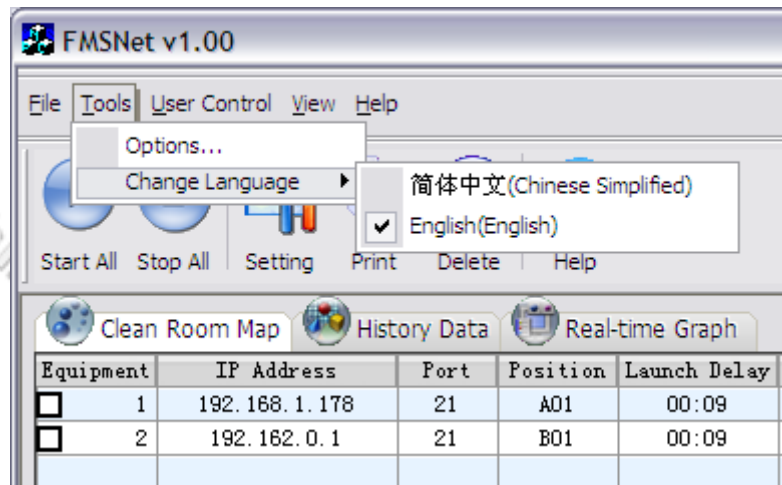
0.0 1

Old IP address: 192.168.1.178

New IP address: 192.168.1.178 Modify

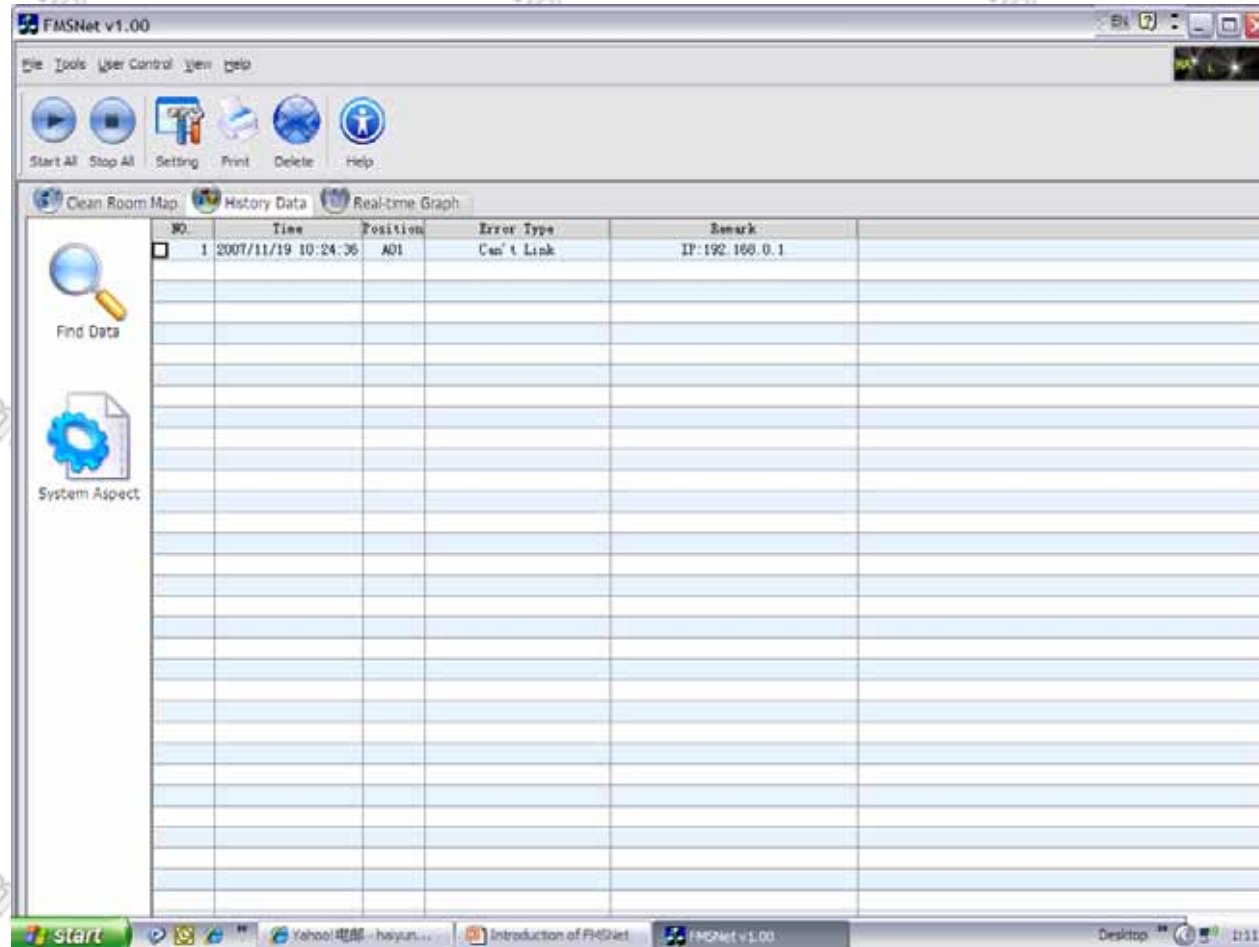
Tools

Settings and language selections



Historic data

Real time data and historic data listed in the table



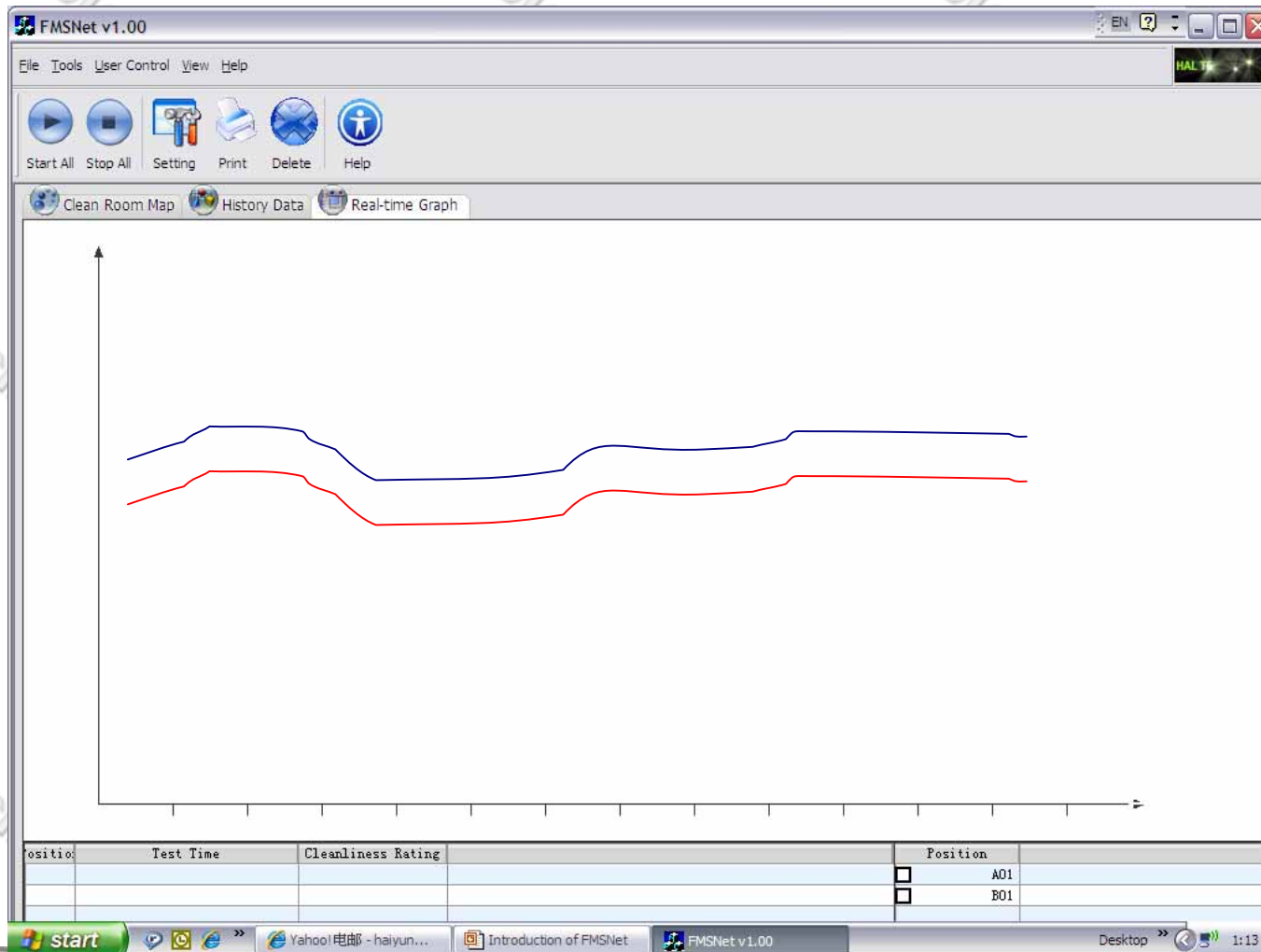
The screenshot shows the FMSNet v1.00 application window. The interface includes a menu bar (File, Tools, User Control, View, Help), a toolbar with icons for Start All, Stop All, Setting, Print, Delete, and Help, and a main area with three tabs: Clean Room Map, History Data, and Real-time Graph. The History Data tab is active, displaying a table with the following columns: NO., Time, Position, Error Type, and Remark. The table contains one data row with the following values:

NO.	Time	Position	Error Type	Remark
1	2007/11/19 10:24:36	A01	Can't Link	IP:192.168.0.1

The table has a search icon labeled 'Find Data' and a gear icon labeled 'System Aspect' on the left side. The Windows taskbar at the bottom shows the Start button, several open applications (Yahoo! 電郵, Introduction of FMSNet, FMSNet v1.00), and the system tray with the date and time (11/19).

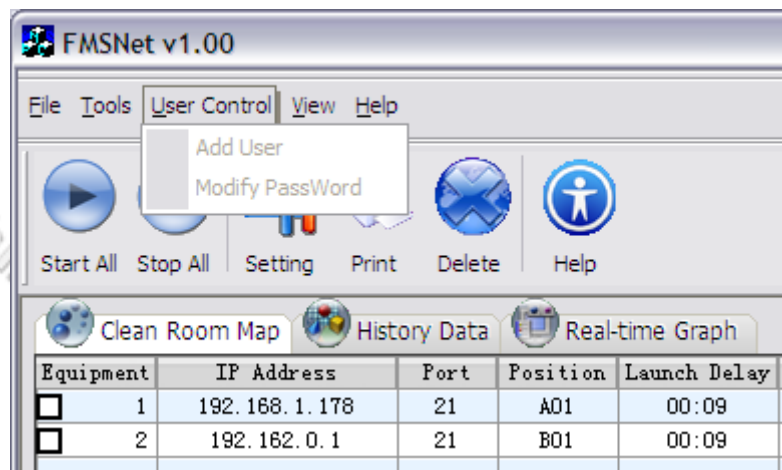
Real Time Graph

Chart shows trend line of each channel in real time



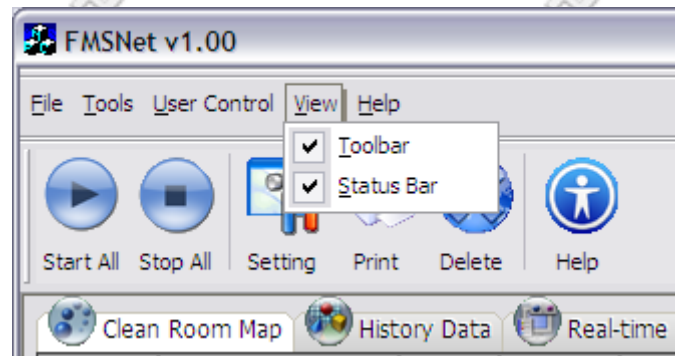
Menu Bar – User Control

Assign users access level and password



Menu Bar - View

Turn on or off the status bar or tool bar





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