Landis +
Gyr

manage energy better

Ripple Control Command System
Landis+Gyr FPS

The new reference class for ripple control systems

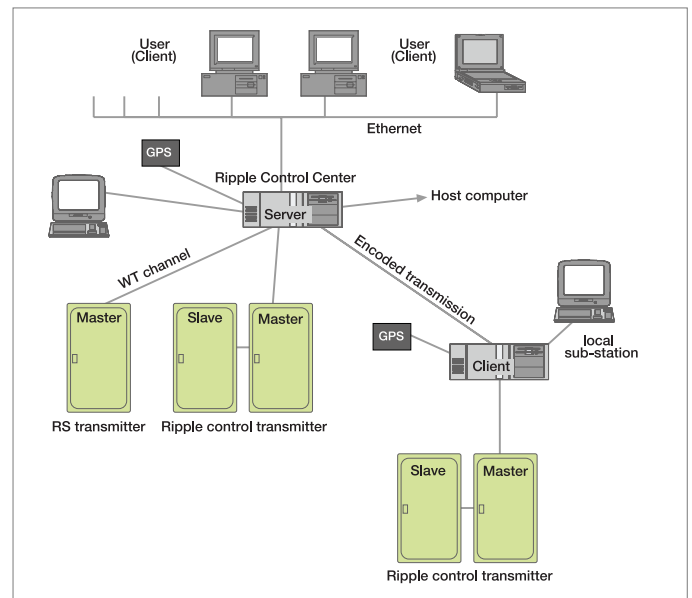# Wide range of functions, high flexibility, absolute reliability:

With Landis+Gyr FPS your ripple control system runs smoother than ever

This latest development is based on our knowhow in ripple control systems over many years. A command center, with which you can smooth your network load even more simply, precisely and securely. Simple to operate, it can be integrated anywhere and is easy to maintain. For Landis+Gyr FPS, you do not need any extravagant hardware solution: The processor for your ripple control is an industrial PC.

The standard industrial PC with the Linux operating system has proven itself worldwide in thousands of applications – from medical technology to demanding automation and monitoring solutions in various industrial sectors.

The benefits of Landis+Gyr FPS are apparent:

- Use of simple, flexible standard hardware
- High security of investment, economic maintenance and simple software and hardware extensions, as standard components from independent suppliers are used (industry standard prints for the PCI bus, Java based web GUI, PostgreSQL database etc.)
- Connections to any environment without problems, perfect integration possibilities, simple interfaces
- A separate laptop or PC is not required for the operators
- The Landis+Gyr FPS software is based on the latest technology

- Standards: modularly structured and easy to adapt to customer requirements
- The same basic software is used for the central (CU) and local (LU) command units. This results in simple centralized updates and modification of parameters
- Fast data transmission via TCP/IP
- Automatic restart of the command system and update of the scheduling programs after a power failure.

More than you expect:
The basic functions of the new Landis+Gyr FPS

The Landis+Gyr FPS is the perfect solution for every situation. This modern and universal control concept can be used both for the smallest ripple control system with only one substation and also for the central control unit for larger systems. You always obtain high operational security, fast data transmission, complete archiving of all operational events and optimum operating comfort. Depending on your requirements, various redundancy options are available to increase the security of operation. Only the server needs to be maintained, as the clients and service PCs only require a standard web browser with a «JAVA Virtual Machine» and the software is taken directly from the server. It is not surprising that, in their standard execution, the Landis+Gyr FPS functions do not leave much to be desired:

- Operating status monitoring at a glance
- Control and monitoring of 1/4/8/16 transmission devices (can be expanded) with line-specific transmission programs
- LAN communication for the operation/monitoring of the ripple control system from existing workstations
- Real-time control for all the normal transmission codes

- Initiation of ripple control transmission based on time-schedules, external commands, load management programs and manual input
- Command definitions with the following comprehensive set of parameters:

	Typical	Maximum
Adresses	100	300
Commands	500	2000
Initiation times/conditions	300	2000
Special days	50	unlimited
Sub-programs	12	unlimited

- Time synchronization with DCF or GPS with automatic changeover of summer/winter time
- Archiving of the operational events with an analysis-program for the selective display of the data
- Protection against unauthorized operation with threelevels of authorization
- System data (parameters, ripple control programs, long-term archive etc.) can be easily transferred to MSOffice programs (Excel or Access) for individual analysis or display

Everything that you require:
The new Landis+Gyr FPS extended features

You can start small or immediately begin with a larger installation: the Landis+Gyr FPS is modularly structured and grows with requirements. It is well known that load management is one of the most economically interesting applications of ripple control: depending on the energy supply contract, it can be used for both adhering to an agreed peak load and also for complying with an energy schedule. It therefore reduces the energy procurement costs. This is an important factor for success in the increasingly liberalized electricity markets. The possibility of integrating the ripple control functions in power system control systems is also worth mentioning. With uniform operation of both the power system controls and ripple control applications and the use of common resources such as: computer, operating workstations, data storage etc., the integration contributes to the minimization of investment, operating and maintenance costs.
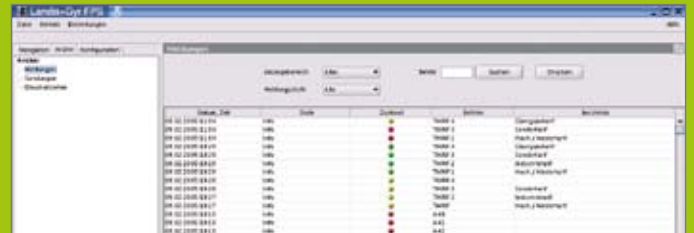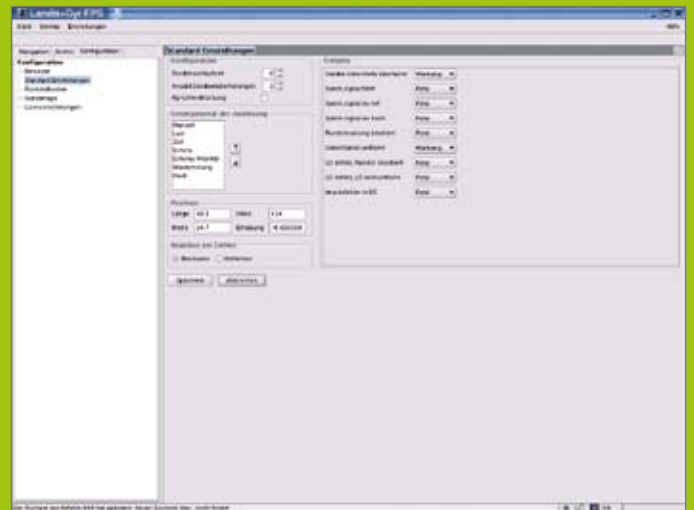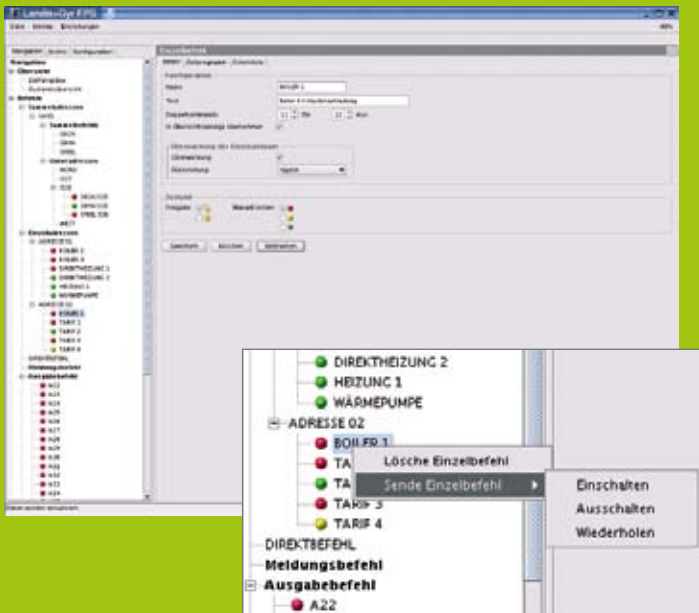
- Dynamic load management for the load dependent control and monitoring of 100 load groups with integrated acquisition and summing of max.16 part loads
- Control and monitoring of the system via the workstations of a host computer thanks to the appropriate interface, e.g. to a power system control center.
- Double-computer execution to increase the operational security with automatic switchover from the MAIN to the STANDBY computer in the event of a failure
- Possibility of general data transfer between the center and the substations in addition to the ripple control communication with coded transmission
- Automatic software update for the substations

Structure of the Landis+Gyr FPS software	
Component	Description
Client	– Interactive user interface with real-time status updates
Web server	– Automatically updated user interface, very important for mobile service use or remote access – Supports access by several users at the same time
Operations applications	– Configuration of the ripple control commands, conditions and operating rules – Analysis and statistical applications – Data export via ODBC
Adapter	– Interface connections via IEC 60870-5-104 – Open for further connections
Communication	– The time-critical portions for the execution of the ripple control commands – Control logic based on the I/O signals, the configuration data and the load on the network
Database	– Storage of the configuration data – Storage of the different events
Operating system	– Linux as a stable, real-time platform for Landis+Gyr FPS

Simpler than you ever expected:
The new Landis+Gyr FPS user interface

The possibilities of Landis+Gyr FPS are manifold and comprehensive. However, it is very easy to work with FPS. We have placed great emphasis on a structured and clear design of the user interface. As an example, the following pictures should give a good idea on the look and feel of the new, user-friendly Landis+Gyr FPS concept.

Manage energy better

We deliver peace-of-mind when it comes to managing your energy. Decades of leadership in technology and in-depth -knowledge at Landis+Gyr means we are able to offer you an extensive, high quality and proven portfolio.

Obtaining the highest level of energy efficiency has never been easier. We have translated our unique expertise of utility -processes into integrated energy management solutions and we can help you streamline your processes, increase customer loyalty and secure revenue.

Let us tailor our innovative solutions to meet your specific needs. Whether electricity, water, heat/cold, gas metering or load -management, we provide what you need to ensure that your energy is managed with increased precision and reliability.

With Landis+Gyr as your trusted partner, you can manage energy better.

Landis+Gyr in short

- 5000 employees worldwide
- Operations on all five continents
- Broadest portfolio of products and services in the industry
- 25 years of smart metering experience
- 1000 AMM systems delivered
- 300 million energy meters produced
- Largest relevant engineering capacity in the industry
- 60 years of direct load management experience
- 15 million load management receivers produced
- ISO certified for quality and environmental processes
- World leader in integrated energy management solutions
- Committed to improved energy efficiency and environmental conservation

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