

Free advice:

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JST Product Overview

A summary of our products in a compact PDF file. We've provided the most important information, compressed into a few pages.

Product overview

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DisplayWall

THE OPERATOR'S TEAMVIEW

Monitor walls with seamless 24/7 LC displays and alarm function

Quality: Developed for 24/7 running in control rooms with S-PVA-Panel

Proactive: Interfaces for event-controlled alarm systems with PixelDetection®

Clear layout: Cause analysis and decision-making with "TeamView"

Operation: In real time with keyboard & mouse, right on the monitor wall

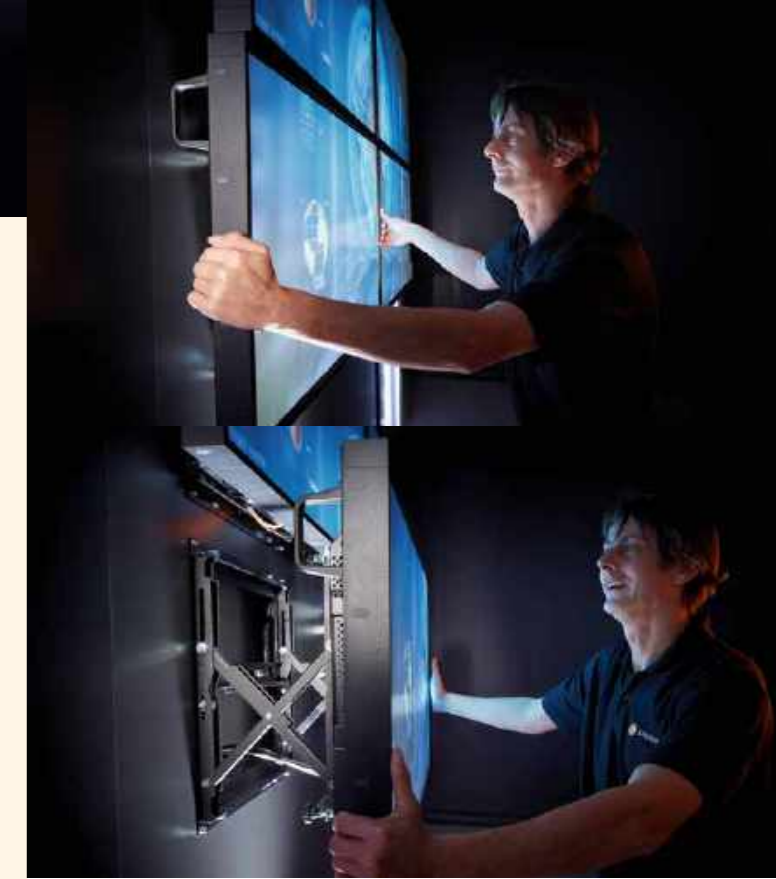
Event-controlled: The computers and cameras are switched on automatically in the event of alarms

JST DisplayWalls are the major players in your control room

A DisplayWall consists of several large LC displays or back-projection cubes that are installed on top of and next to each other. This creates a **large-format, interconnected image**. The image is only interrupted by frame widths of around 1.2 mm to 15 mm, depending on the display technology used.

What makes JST DisplayWalls special is that they are **event-controlled**. The computers and cameras can thus be switched on automatically, without the intervention of the operator, and operated in real time.

The operator talks here about the "TeamView", because now **the entire team has the same level of knowledge about the most important alarms**.



04 | Clear, structured, tidy: Consolidating a vast range of system, plant and danger situations means that monitoring and control can be more efficient. There is no need for superfluous workplace monitors. The operator can keep an eye on everything.

05 | JST DisplayWalls have interfaces to event-controlled alarm systems! That means: Showing the most important alarms at the required time, at the right place and in the most effective size. In this way, the DisplayWall becomes a reliable information hub, on which no alarm can be accidentally missed.

06 | Improved decision-making reliability: To be able to act even more quickly and on a constantly coordinated basis, further information about the alarms is automatically added as the situation requires. The various different alarms can also be correlated in all sorts of ways. Only JST offers this particular intelligence.

07 | Good design and functional added value: The DisplayWall can be supplemented with an attractive cover and the JST AlarmLight on request. In the event of a fault, the AlarmLight can flash red – depending on configuration – so that the entire team is notified immediately, especially in the event of critical alarms.

Seven good reasons for choosing JST DisplayWalls:

01 | Accurate display: The interconnections between different alarms are shown quickly and clearly because of the large display surface, large vertical and horizontal perspectives, perfect illumination using energy-saving LED background lighting a high pixel resolution.

02 | Durability: JST DisplayWalls are specially designed for continuous 24/7 running in control rooms. These are definitely not the kind of televisions that are used in private homes.

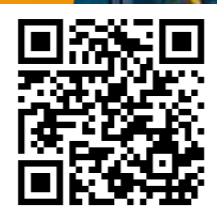
03 | Fast cause analysis and decision-making with "TeamView": The entire control room team is provided with the most important information at the same time. The DisplayWall can even be operated in parallel or alternately and in real time. It thus becomes a real extension of the workplace desktop. The result: substantially improved team work, giving faster reactions and fault elimination.

Need more information?

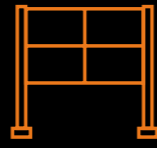
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JST DisplayRack

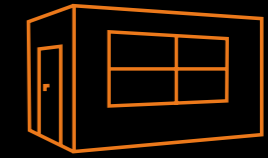


Maybe you don't have a solid wall for mounting your large-format displays? Or maybe you'd like some flexibility when it comes to choosing your display sizes in the future? Then the free-standing JST DisplayRacks are the right choice for you. The Basic Unit – consisting of two side elements – can be expanded by any number of Extension Units as required.

The many practical features of the DisplayRack include the precise adjustment capability. Screens can be freely adjusted with absolute precision, both in height and in width. The result: a visually perfect, uniform set of panel images. Other plus points include the provision of special aluminium cable ducting and the rollers "invisibly" integrated in the foot stabiliser which offer optimum service access and allow the entire DisplayWall to be moved around freely.

Matching media boards with sliding doors providing space for technical installations or paper storage are available as an option.

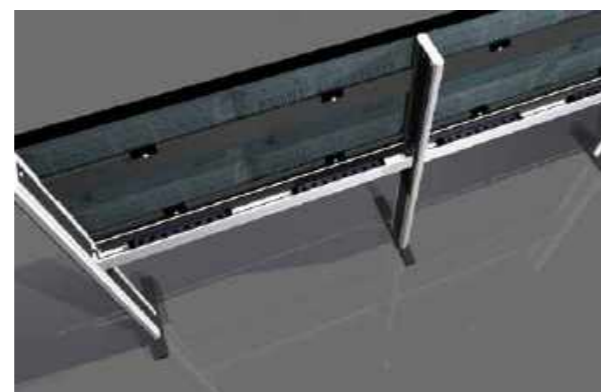
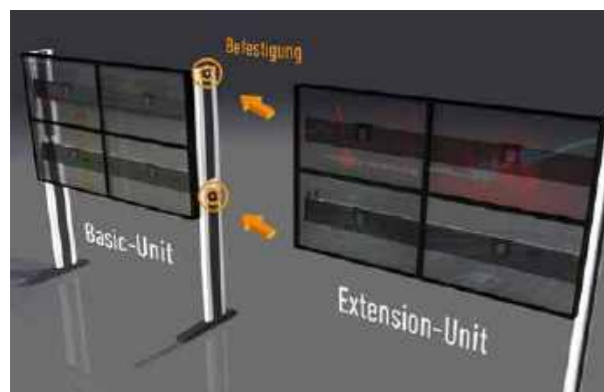
JST DisplayCover



The JST DisplayCover is a particularly visually appealing option for large-format technology concepts in the control room. With this room-in-room structure, the DisplayRacks described on the previous page form the basis for a solution that's both practical and well designed.

Alongside its attractive appearance, the JST DisplayCover combines a whole series of important functions for your control room: It keeps annoying fan noises and unwanted heat emissions away from the control station. In addition, the hardware located in the newly built technical room can not only be installed in perfectly fitting racks, but also be efficiently cooled. Even access for maintenance does not affect what happens in the control room.

The DisplayCover provides not only a cover with special acoustic material but also space for cabinet systems with different door variants and drawers.



JST DisplayRack: Front and rear view with Basic Unit; the two side sections can be extended to the left and right with any number of Extension Units.

Foot stabiliser with integrated rollers: If necessary, the DisplayRack can be installed right in front of a wall and rolled straight forward for inspection.

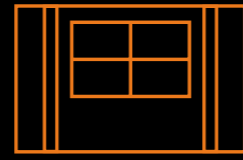


The special brush seal between the large-format screen and the cover enable flush-fit closure. The additional choice of acoustic material lowers the noise level in the control room and closes off sounds behind the decorative DisplayCover.

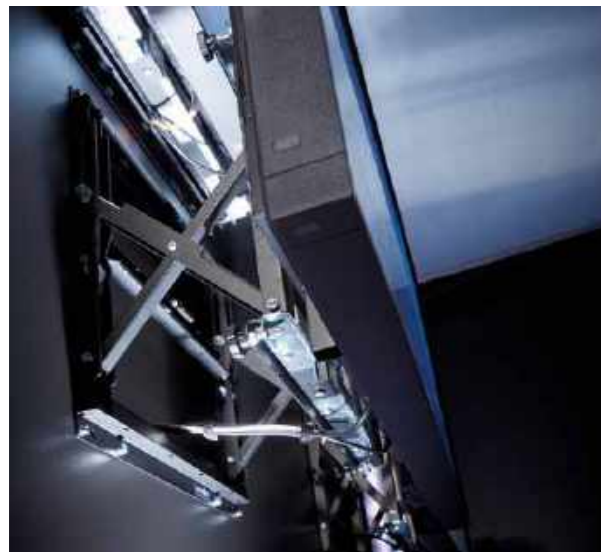


The DisplayCover designs are as varied as our customers' requirements: Cupboard systems with wing or sliding doors, drawers with special interiors or integrated loudspeakers – the JST DisplayCover is both attractive and highly practical.

JST DisplaySuit

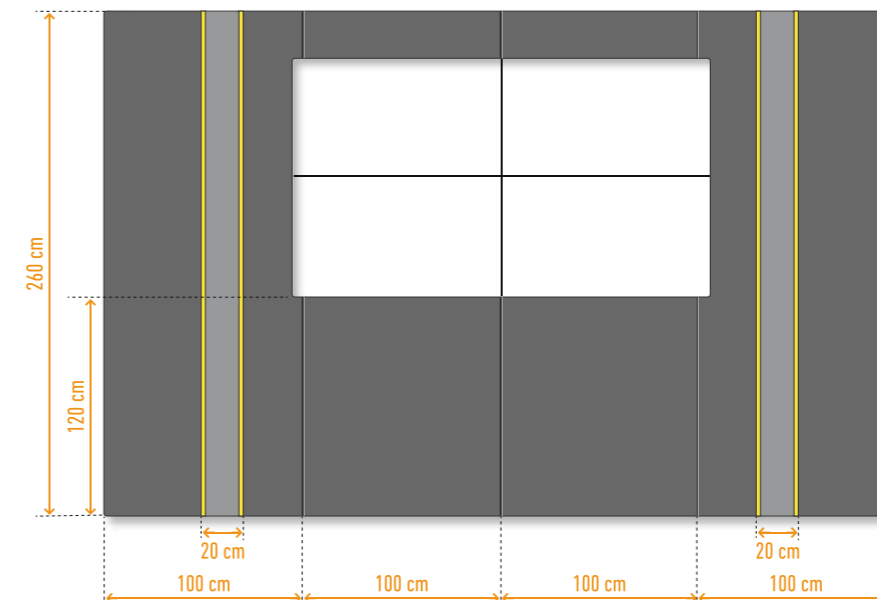
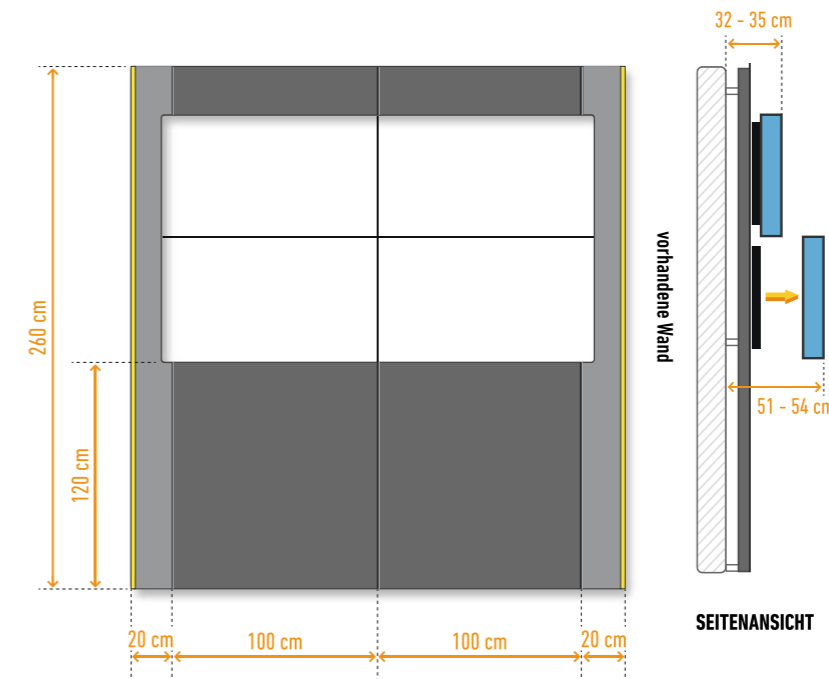
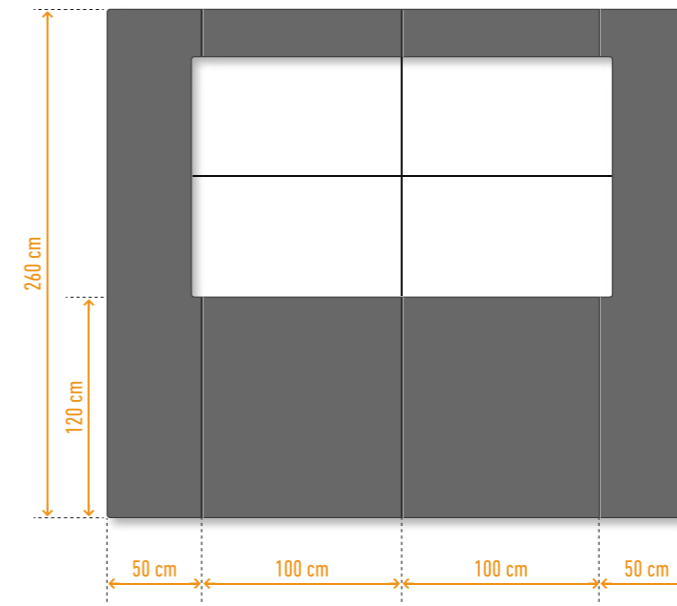


The DisplaySuit: practical, perfectly designed and uniquely finished. The equipment options available will not only be a visual highlight in your control room. The use of the Quick-Out assembly system also sets new standards from a practical viewpoint. Even maintenance during ongoing operation is not a problem.



The **Quick-Out assembly system** means that individual displays can be easily pushed forward just by pressing lightly on the outer edges – even in ongoing operation. In addition, there is a technical compartment behind every large-format display. This means that the displays can rest directly on the panels of the DisplaySuit.

DisplaySuit panels: A successful solution visually – easily accessible wall panels under the large-format displays create a perfect first impression when closed. The panels can be easily removed without tools to reveal concealed connection.



Option A

without AlarmLight



Option B

with AlarmLight and narrow wall cover



Option C

with AlarmLight and broad wall cover



AlarmLight

THE SIGNAL INDICATOR

AlarmLight for DisplaySuit: An unlimited range of colours – visually and technically a real “bright spot” in your control room!



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AlarmLight for DisplaySuit

Only JST DisplayWalls and the Stratos X11 control room desk have interfaces to the event-controlled alarm system! The advantage for you: Showing the most important alarms at the required time, at the right place and in the most effective size. This is what turns the DisplayWall into a reliable information hub, on which no alarm can be accidentally missed.

The AlarmLight light band is located in the stainless steel strips on the left and right of the large-format screen; it can also be integrated into the back wall of the Stratos operator desk. **The focus of the control room team is directly straight to critical alarms** by event-controlled light signals via your monitoring or process control system.

- ✓ Shorter response times
- ✓ Attracts the team's attention more effectively with critical alarms
- ✓ No alarm can be missed
- ✓ Better visibility during minimally manned shifts
- ✓ Simple connection to your monitoring tools

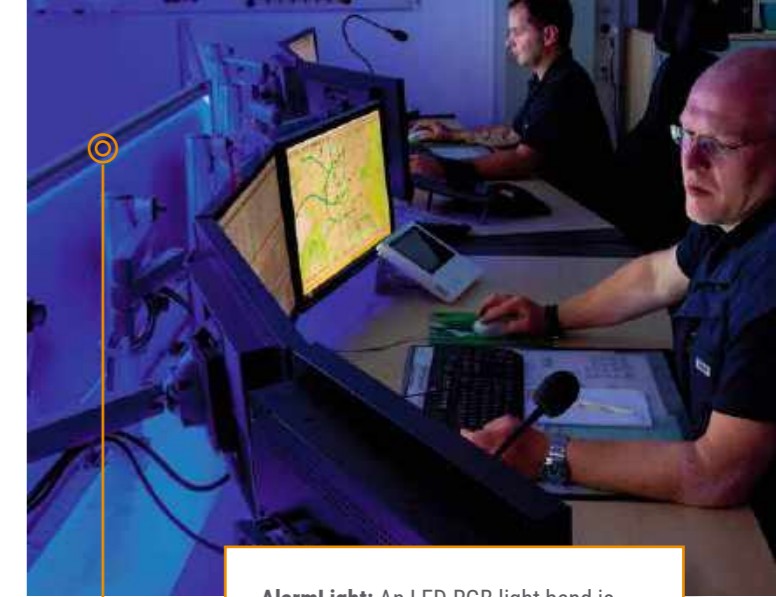
The choice is yours: Either you opt for a pre-programmed colour spectrum or you set the AlarmLight manually to suit your needs using the remote operation facility. The aim is to **ensure the operator's level of concentration is always high**. The pleasant ambient lighting around the work station plays a major role in this – especially during darker working hours.



Example 1: Your monitoring or process control system issues a warning which is forwarded to the AlarmLight. The AlarmLight changes the colour to yellow.



Example 2: Your monitoring or process control system reports a critical issue which is forwarded to the AlarmLight. The AlarmLight pulsates in red.



AlarmLight: An LED-RGB light band is located on the Stratos back wall above the monitors.

BACKGROUND: It has been proved that event-controlled light signals are perceived more effectively by the entire team than a piece of information on a monitor.

The AlarmLight is controlled by your monitoring or process control system so that the colour can be changed depending on the event. The flashing and pulsing of the AlarmLight can also be individually adjusted.



MultiConsoling®

THE OPERATOR'S HAND

myGUI®
THE OPERATOR'S INTERFACE

Your network-independent real-time control center:
You can connect all the sources you want – from the computer to the camera – with the monitors at the work station, large-format display wall and even the local crisis room.

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MultiConsoling® controls your work stations and the display wall in real time independently of the IP network

MultiConsoling® combines the features of a graphic controller with the advantages of a **sophisticated matrix system** and allows a highly available controlling of your video wall.

With the **myGUI® user interface**, every operator will have control of the large display and work stations well in hand in just four minutes!

MultiConsoling® – developed by JST

Once you've got to know this fast, totally flexible working method, you'll never want to do without it again. The combination of the **"MultiCenter" hardware component** and the unique **myGUI® software** provides every function you need for optimum control room operation.



 **The hardware component:**

All computers are connected, with keyboard, mouse, monitor and sound card if provided, to the "heart" of the JST MultiConsoling® – the MultiCenter. Cameras and TV receivers can also be linked with the MultiCenter. The MultiCenter comes with the MultiConsoling® API so that it can be controlled by the myGUI® software. The MultiCenter is thus fully tuned to all sorts of different working methods in the control room.

- ✓ **Fast:** Imaging and keyboard/mouse operation in real time
- ✓ **Secure:** Transmission without network
- ✓ **Flexible:** No additional software on your source computers, immediate implementation
- ✓ **A safe investment:** Totally independent of the operating system of the source computers
- ✓ **Scalable:** Display on operator station monitors and on DisplayWalls for the entire control room team
- ✓ **Free seating:** The operator can swap work stations in just a few seconds



 **The software component:**

The crucial hub of a MultiConsoling® system is the **myGUI® graphical user interface**. This can either be displayed on a work station monitor or on the **innovative CommandPad**, a concept developed exclusively by the JST ideas factory. With the CommandPad, staff can keep a constant eye on even the most complex control room technology using the graphical user interface.



- ✓ **Intuitive:** Designed in the 3D layout of your control room
- ✓ **Touch optimized:** Activate all systems instantly at the touch of a finger
- ✓ **Clearly laid out:** Just one mouse/keyboard or CommandPad at workstation
- ✓ **Secure:** Superior handling in stressful situations
- ✓ **Comprehensive:** Operation of workstations, large-format systems, cameras, meeting rooms, media technology and much more
- ✓ **Compatible:** No installation on your computers necessary

Effortless control of all systems - with the new myGUI®

Secure, self-explanatory, simple – that's how easy it is to sum up the system controls in the control room with myGUI®. **Thanks to the new design it's now even more effective in field tests.**

The myGUI® is already being used as the user interface for the MultiConsoling® real-time control system in hundreds of control rooms. **The clear, intuitive layout of the graphical elements makes effortless and superior control of the entire infrastructure in the control room possible.** The vivid design reflects a sculpted, customized **3D layout** of the respective working environment.

You will be in control of all systems. With one click you can control workstations, large-display technologies, cameras, meeting rooms, lighting, media, air conditioning and building services engineering. **The system can be operated using the mouse, CommandPad and touch commands.**

This is new:

The idea: new layout, new flexibility.

The Graphical User Interface has been updated and **optimized for touchscreens** alongside the desktop version. At the same time, users benefit from maximum visibility.

The result: A modern user interface style that makes the handling of MultiConsoling® and thus the control of the entire control room infrastructure a cinch – no matter if it's with a mouse and keyboard or the touch version.

Clearly structured text buttons and source lists – even for the structures of external rooms – make all systems readily available with the touch of a finger.



CommandPad
THE OPERATOR'S TOUCH INTERFACE



One look, one click – CommandPad gives you control in seconds

With the CommandPad, a **control panel** specially optimized for 24/7 operation, the operator is always able to keep an eye on the myGUI® user interface and thus the entire control room control system.

The decisive advantage of this component: An endless selection of pre-defined myActions is available, making tiresome activation of individual systems, for example during shift transfers, a thing of the past.

In the built-in version, the CommandPad is **integrated directly into the operator's console**, leaving sufficient space for working with a mouse and keyboard. In order to also be able to benefit from the panel's compelling advantages with regard to existing furniture, a special surface-mounted variant was also developed, which is suitable for external meeting rooms, among other things.

Work station and large screen control with MultiConsoling®

1. The hardware components of MultiConsoling®

All sources (computers, cameras, SAT receivers, etc.) are installed in a **technical room**, away from the control room. The advantage for you: less heat and noise in the control room.

MultiConsoling® works by accessing the sources to be displayed **without any network**, which means that it is highly available, secure and without any loss of image and audio quality. Transmission of mouse and keyboard inputs are entered without delay.

The technical room contains grabbers, the MultiCenter, computers and myGUI® controller.

B Grabbers pick up the signals from the remote sources and forward these to the MultiCenter.

C MultiCenter provides up to 288 ports, depending on the model series, to connect the grabbers (computers) and the MultiConsoles.

No additional software required on your source computers

In most cases, running external software on sensitive sources such as alarm and process computers is not allowed, for warranty and security reasons. The **myGUI® database** is therefore only installed on a **myGUI® controller**.

noIP variant

Maximum security for the protection of KRITIS against a cyber attack: MultiConsoling® with noIP technology

The superbly effective solution from JST: consistent separation of the **office network** (internet), which is essential for employee communication, from the system **production network**. That means that the production network – of a power station, for example – works independently of the IP network.

So if a hacker should unexpectedly get as far as the **office network**, it is impossible to use the network to access the control room controls in the **production network** and thus the controls of all the systems.

1 TECHNICAL ROOM

A Remote sources

(computers, TV receivers, other hardware)

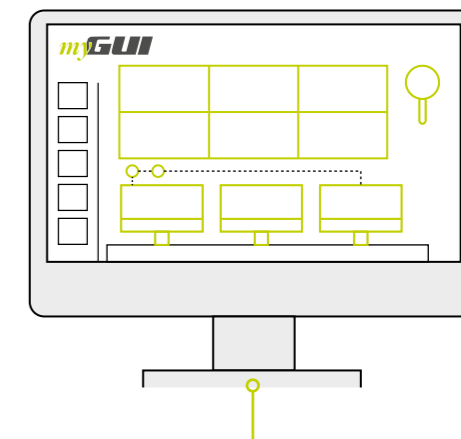
The **mouse, keyboard, monitor and audio** are connected to a MultiConsole.

D MultiConsoles are housed in the control room. They are the receivers and are used to flexibly connect remote sources to display walls and work station monitors.

ACCESS DENIED

2 CONTROL ROOM

As soon as you drag a source with your Live Icon (real-time preview) to a required field in the myGUI®, the source can actually be seen on the desired display (**large-format screen or work station monitor**) and can be used in real time. All sources can be shifted from place to place or even operated by several operators at the same time. The operator can change work station in just a few seconds.



Respond instantly to alarms with the CommandPanel

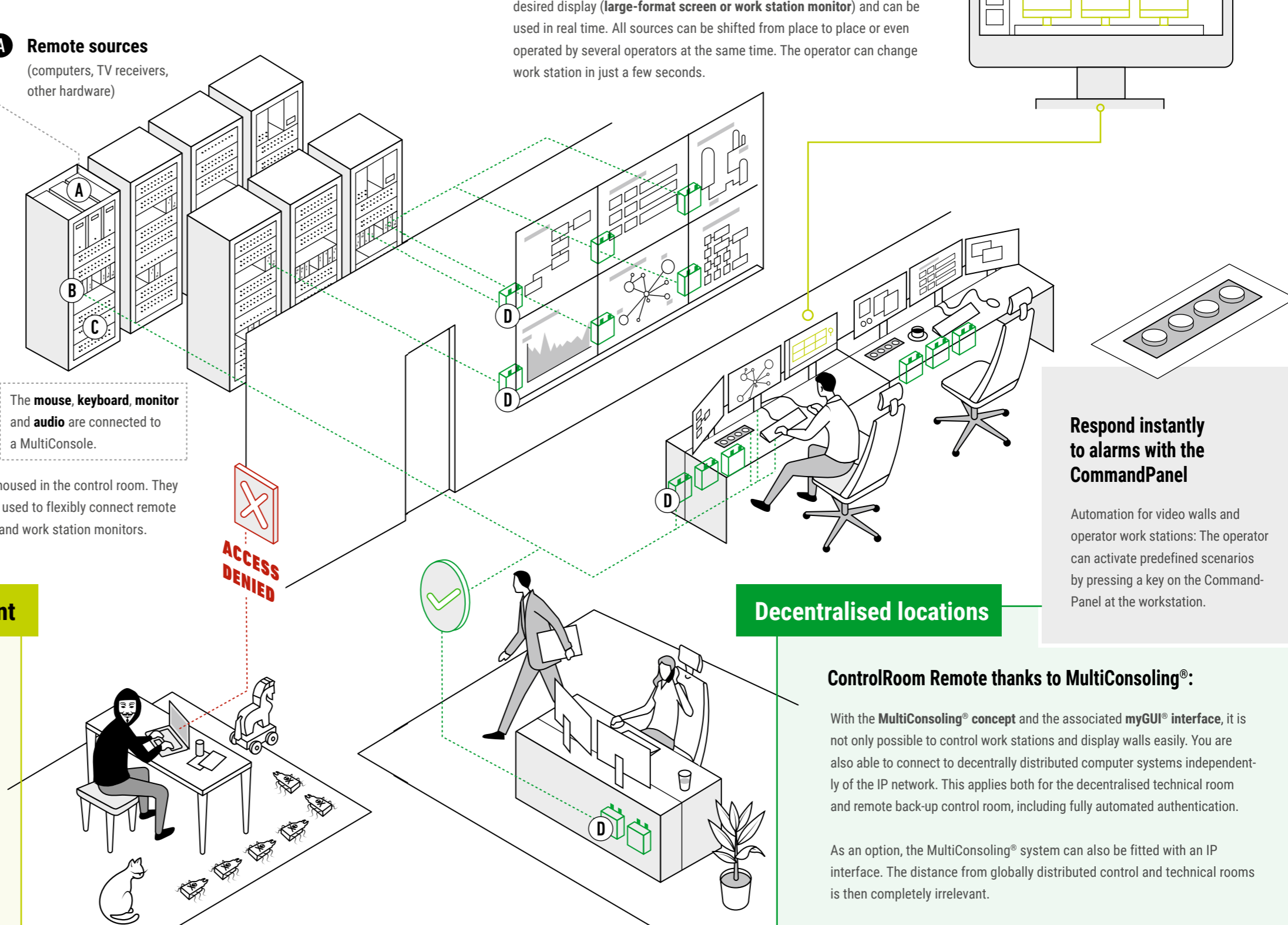
Automation for video walls and operator work stations: The operator can activate predefined scenarios by pressing a key on the Command-Panel at the workstation.

Decentralised locations

ControlRoom Remote thanks to MultiConsoling®:

With the **MultiConsoling® concept** and the associated **myGUI® interface**, it is not only possible to control work stations and display walls easily. You are also able to connect to decentrally distributed computer systems independently of the IP network. This applies both for the decentralised technical room and remote back-up control room, including fully automated authentication.

As an option, the MultiConsoling® system can also be fitted with an IP interface. The distance from globally distributed control and technical rooms is then completely irrelevant.



Practical examples

JST MultiConsoling® concept:

- ☑ **MultiCenter** in the technology room
- ☑ **myGUI®-Software** in the control room

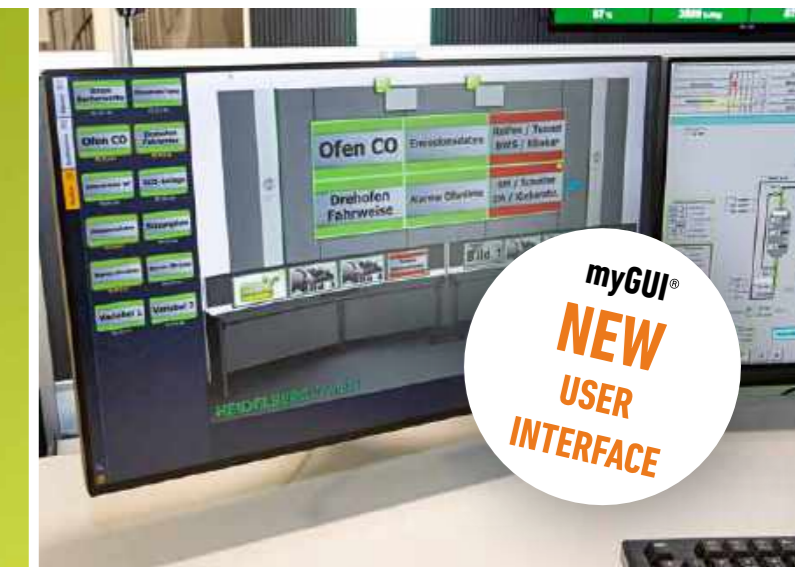
PCK
Raffinerie GmbH



HZB Helmholtz
Zentrum Berlin

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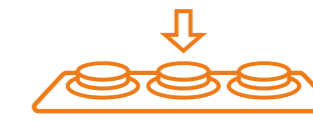
Mouse operating



Touch operating



Timer



CommandPanel



Voice control



Alarms

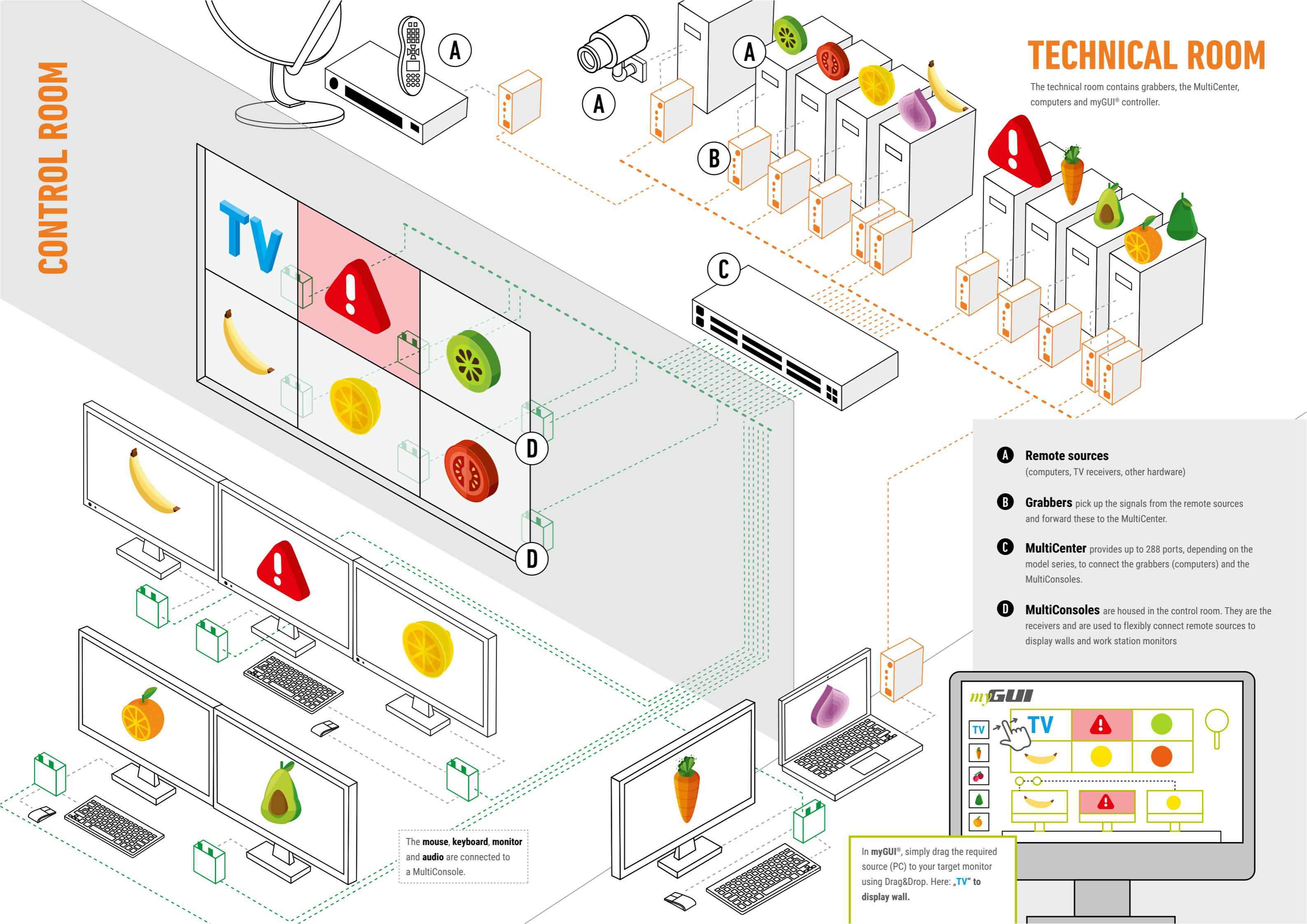
*Automated, for example using PixelDetection®, traps, I/O contacts, external alarm tools



CONTROL ROOM

TECHNICAL ROOM

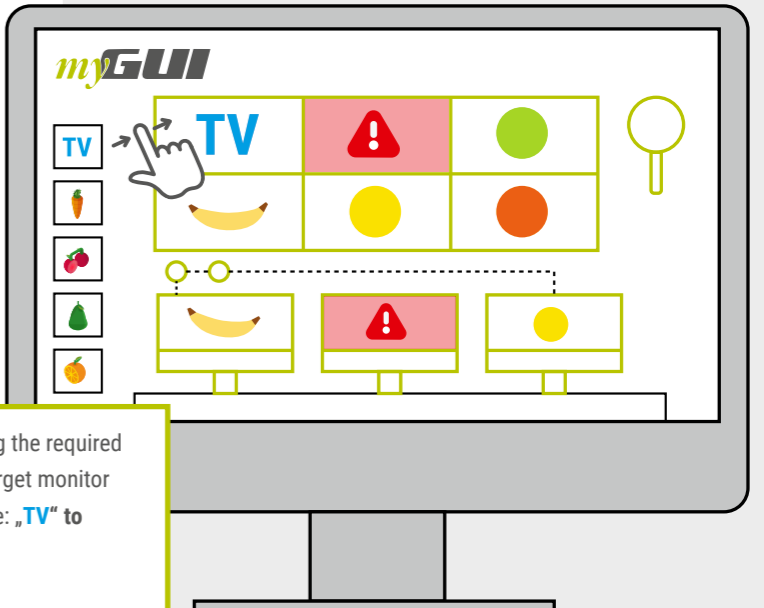
The technical room contains grabbers, the MultiCenter, computers and myGUI® controller.



- A Remote sources**
(computers, TV receivers, other hardware)
- B Grabbers** pick up the signals from the remote sources and forward these to the MultiCenter.
- C MultiCenter** provides up to 288 ports, depending on the model series, to connect the grabbers (computers) and the MultiConsoles.
- D MultiConsoles** are housed in the control room. They are the receivers and are used to flexibly connect remote sources to display walls and work station monitors

The mouse, keyboard, monitor and audio are connected to a MultiConsole.

In myGUI®, simply drag the required source (PC) to your target monitor using Drag&Drop. Here: „TV“ to display wall.



MultiStreaming

TRANSFER YOUR DESK

myGUI[®]
THE OPERATOR'S INTERFACE

Flexible, safe, cost-saving – these are three of the convincing advantages of JST MultiStreaming.

The **software-based** KVM solution was designed by the Jungmann development team specifically designed for control rooms where alternative control options are sought.



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← Here you will learn, what makes the streaming software so **unique**

Software for the smart management of the control center

Flexible switch on of any source to any screen. Only one mouse and keyboard for all applications. Intuitive operation with the Graphical User Interface myGUI[®]. These convincing advantages of KVM technology can be realized from today with a software.

MultiStreaming - the new, software-based solution for the safe and convenient control of modern control rooms. The advantages are obvious: **The use of cost-intensive special hardware can be completely dispensed with.** The only prerequisite is the installation of the receiver software developed by JST on selected computers in a network.

One of the most remarkable features of the streaming software is the so-called **SplitView function**. With it, the user enjoys all the options that otherwise only a classic graphics controller offers. **Different systems**

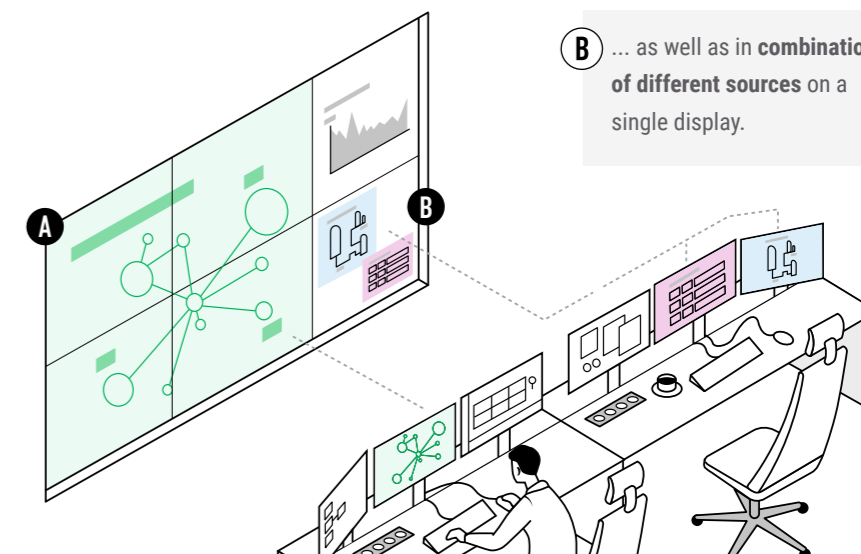
are displayed in combination on a single monitor. Whether at the workstation or large DisplayWall - the SplitView feature makes it possible to display complete screen contents or, optionally, critical parts of the screen. This means that on a large screen wall with four displays displays, not only four, but eight, ten or more sources can be sources can be displayed simultaneously.

Further plus points: The time required for setup is significantly minimized in contrast to conventional KVM structures. Future system expansions can be implemented as well as a hybrid system in combination with the JST MultiConsoling[®] concept without any problems.










With MultiStreaming there are no longer any limits to the **flexible interconnection of systems**. The user streams the desired information, calls up the the selected sources on the monitors of his workstation or on the large screen wall. Even newcomers can easily master the operation.

SplitView makes it possible:

Each individual monitor can be used variably. The desired views can be displayed **across all monitors ...**



B ... as well as in combinations of different sources on a single display.

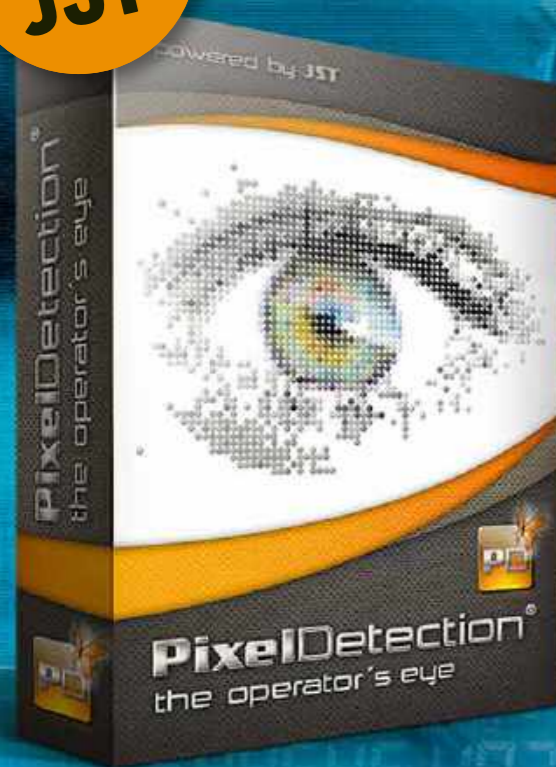
- | | |
|--|--|
|  Functional: Streaming of all information over the network |  Convenient: Control of all systems with the myGUI [®] user interface |
|  Flexible: Each individual screen becomes a multi-display with SplitView |  Manageable: Per workstation only one keyboard and mouse |
|  Uncomplicated: Only one single reception software necessary |  Compatible: Hybrid solution with Multi-Consoling [®] possible |
|  Calculable: No complex special hardware necessary |  Secure: Redundancy through distribution to different individual computers |
|  Inexpensive: Integrate new computers at low cost | |

PixelDetection®

THE OPERATOR'S EYE

PixelDetection®, "the operator's eye", supports operators if too many surveillance monitors are superimposed on the work station. Tried and tested for many years: PixelDetection® **shortens the response times with critical alarms.**

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PixelDetection®, the Operator's Eye

In the past, many operators referred to the PixelDetection® software as "the operator's eye". And indeed, PixelDetection® works on the same principle as an operator in a control station. He always needs to keep an eye on his surveillance monitors. **PixelDetection® films (monitors) the content of the desired monitors and compares the recording with reference values** that you have defined beforehand. These reference values are defined colours or texts in your applications.

Operating the PixelDetection® software is easy: You mark the areas that are to be monitored with one or several frames. The areas within the frames are monitored by PixelDetection® for changes in colour or text. You can also draw a frame around the entire screen if you don't know where an alarm is likely to appear. As soon as the preset reference value is reached, an alarm is triggered on the display board or at the work station.

Four good reasons for choosing the multi-award-winning software from JST:

01 | Supports concentration:

There's no longer any need to watch various green displays, since PixelDetection® is event-controlled, and **only notifies the operator when an alarm appears on the monitoring computer.**

02 | Scalable:

The most important alarms are forwarded across locations or for the stand-by team with a screenshot of the alarm situation. In this way, staff can still make the decisions **even if they are not actually in the control room.**



PixelDetection® in use at an Audi IT control station

In contrast to the human eye, PixelDetection® can monitor countless screens or computers. There's no need to program or adapt any interfaces, because PixelDetection® works on a purely pixel-oriented basis. JST does not need to install any software on the computers to be monitored. We just work with your application's video signal!



03 | Space-saving:

No need for lots of monitors at the work station and reduction in excessively large DisplayWalls.

04 | Flexible:

You keep your monitoring tools, and do not need to coordinate any interfaces or make sure that lots of different protocols are compatible. The reason: **PixelDetection® detects texts and colours solely on a pixel basis.**

CockpitView

THE OPERATOR'S DASHBOARD

CockpitView supports you in the effective monitoring of your computers and systems.

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The IP-independent cockpit for your control room

CockpitView is also called "the operator's dashboard" by its users, since the operator can put together his panel of instruments in the control room exactly as he needs to give an overview. This is what modern system and plant control looks like nowadays. "Fast, secure, flexible and scalable" – these are the four factors that make CockpitView globally unique:

- ✓ **Fast:** The most important information at a glance, keyboard and mouse operation in real time
- ✓ **Secure:** Transmission without network
- ✓ **Flexible:** No additional software on your source computers, immediate implementation
- ✓ **Scalable:** Display at the work station monitor or on VideoWalls for the entire control room team

To be able to monitor the IT systems, video cameras, building technology, production equipment, servers, software management systems, etc. in control rooms, all sorts of monitors with different applications are essential. For the operators in the control room, this means keeping a permanent eye on a large number of monitors. Monitoring the host of different applications means that the number of monitors at the work station is increasing. In addition, there are often large display systems, which are actually intended to make things easier for staff; but ultimately, these become an additional display that needs to be watched.

In this way, the amount of data to be monitored on the large display system and the work station is constantly rising, and **the point is reached where careful monitoring of all the applications is no longer possible**. A recent study by the Federal Institute for Occupational Health and Safety (BAuA) on the subject of "Screen working in control stations" showed that the long-term monitoring of more than three monitors at the work station is not possible without errors.

Put your important data all together on a central Cockpit Monitor. Cut out the relevant information from different computers and group it together in



CockpitView. It doesn't matter if the computers are working in different network segments. Operate your systems with the keyboard and mouse in real time.

No additional software needs to be installed on any of your computers displayed in the CockpitView monitor. **This is what modern system and plant control looks like nowadays!**

The long-term monitoring of more than three monitors at the work station is not possible without errors.

Results of the recent study by the Federal Institute for Occupational Health and Safety (BAuA) on the subject of "Screen working in control stations".

myLogin®

THE OPERATOR'S SECURITY

The **Free-Seating concept** specially developed for control centers allows automated logging in and out using a chip card – without passwords.



ONLY AT
JST

Need more information?

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or visit our website: www.jungmann.de



More flexibility in your control room with better security – this is what myLogin® offers

Easy operation and **transparency** are two important arguments in favor of myLogin®.

Every staff member has his own card containing individual authorisations. If he leaves his work station, his team colleagues can unlock the computer keyboard and mouse using their own login. **Lightning fast and super-simple.** In this way, a free-seating concept can be combined with maximum security standards if required.

Another very convenient feature of the myLogin® technology ensures maximum transparency: **Every login and log out procedure can be tracked completely using the reporting facility.**



Red RGB-LED light band:
Work station not in use (employee has logged out)

Green RGB-LED light band: Work station actively in use (employee is logged in)

Fast, flexible & secure

myLogin® is a revolutionary solution allowing you to log in and out **at all operator work stations** centrally and quickly using your company ID card.

The login/logout process only takes a few moments and **will also save your personal screen content layout preferences if you wish.**

- ✓ **Fast:** Logging in and out in just a few seconds
- ✓ **Free seating:** The operator can change work stations and the screen content follows him.
- ✓ **Simple:** No software needed on your computers
- ✓ **Secure:** Collective users & group accounts can continue to be used
- ✓ **Flexible:** Use a myLogin® user card or your company ID card
- ✓ **Logbuch:** On request traceable evaluation of login data



MouseRadar

MORE VISIBILITY FOR YOUR MOUSE CURSOR

Maximum usability! With an individually adjustable timer, your mouse will always be visible even in the resting position. So no more annoying shaking and searching. The cursor changes into a clearly visible moving icon.



Showing the cursor

At a work station with several monitors, it sometimes happens that you no longer know which screen you've left the cursor on. If you also use the proactive large display wall as an active work interface, the search for the mouse can turn out to be pretty tricky – and sometimes the operator will move the mouse roughly backward and forward so that the cursor becomes visible again.

This is exactly where the MouseRadar can help: After a variable time, the cursor automatically becomes visible. An animation, which you can configure freely, appears around it. The advantage: The program does not need to be installed on your computer.



- ✓ **Fast:** No more annoying "shaking the mouse" and searching for the cursor
- ✓ **Secure:** No more accidental mouse clicks
- ✓ **Clear:** You see the cursor immediately
- ✓ **Individual:** You can use your own graphics (e.g. company logo)

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ControlRoom automation

THE OPERATOR'S ASSISTANT

With **CommandPad** and **CommandBox**, you can automate routine work and still stay totally in control. You can call up recurring scenarios at the push of a button or let everything run completely automatically, just as you wish.



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Automation for video walls and operator work stations

The CommandBox, which is designed on a redundant basis, is able to reliably receive and **process almost all alarms** and to **forward them at lightning speed to the display wall and work stations**.

The input signals processed include, include floating contacts, audio signals, TCP-IP traps, image data evaluations by PixelDetection®, SNMP and many more. In addition, predefined scenarios can be activated by the operator by pressing a key on the CommandPad at the work station.

Quickly deal with recurring events or call up pre-defined scenarios at the push of a button

With CommandBox, you can automate routine work and still stay totally in control. You can call up recurring tasks at the push of a button or let everything run completely automatically, just as you wish.

The CommandBox communicates with wire-connected technology (e.g. floating contacts) and with software programs. This means that potentially useful constellations can be created for day-to-day operation – get some advice!



The CommandBox acts as the operator's personal assistant. It is responsible for the reliable receipt of all alarms and for their immediate forwarding to the required screens.

- ✓ **Making work easier:** Operators are reliably supported
- ✓ **Lightning fast:** Alarms transferred to work stations and display walls
- ✓ **Secure:** Important alarms will never get lost again
- ✓ **Teamwork:** Systems transferred to large display wall
- ✓ **Flexible:** Almost all input signals are processed
- ✓ **Situation-related:** Complex (alarm) scenarios are also available at the push of a button



CommandPanel: An action or the color change of the AlarmLight is induced by triggering a button. The CommandPanel consists of either five or ten buttons. An LED ring around each button shows the operator which image switching is active. This is a great help, especially in the case of very similar-looking process control or system monitoring screens. The panel is recessed almost flush into the tabletop of the Stratos operator console. The individual buttons are labeled individually.

So, for example

- **the computer with the myGUI® operation** could be switched to a previously selected monitor,
- **a specified computer could be switched as a Big Picture** to a display wall or to different computers as a Single Picture, **using an SOS button, a specified group of peoples**, the IT department or the department manager could be informed of the alarm.

ControlRoom remote

THE OPERATOR'S GLOBAL ACCESS

Distances no longer matter!

Thanks to the MultiConsoling®-based systems, you can connect up your **decentralised situation centers, crisis rooms, standby teams, etc.** really easily. Cross-locational backup scenarios for complete control rooms are also possible!

Need more information?

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ControlRoom Remote: an elegant solution for integrating decentralised structures, systems and locations

Our MultiConsoling®-based systems Grabber IP and Grabber VM enable you to connect up decentralised systems and locations comprehensively and conveniently. Integrate computers in decentralised technical rooms using Grabber IP or access remote virtual machines using Grabber VM. Connect with a decentralised control station using Grabber IP. The operator can connect up local computers as quickly and conveniently as distant systems, since operation is via our uniform myGUI® graphical user interface.

- ✓ **Intuitive:** Only one user interface for the control and connection of display walls
- ✓ **Secure:** Cross-locational backup scenarios of complete control rooms
- ✓ **Flexible:** Simple connection of situation centers, crisis rooms, standby teams, etc.
- ✓ **Fast:** Fully automated authentication



With just one single user interface – the interactive myGUI® in the 3D layout of your control room – it is not only possible to control display walls with ease; you will also be able to switch in to systems and locations across the globe. That applies for decentralised technical rooms, distant backup locations, or your flexible standby team – all with one standardised operating concept.

Geographical distances don't count any more!



TacticTable

CONTROL THE SITUATION

Crisis management and information exchange:

Interactive multi-touch screens create new possibilities for communication in the control room



Would you like more information?

Call us at

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← Performance and flexibility
– experience the interactive
TacticTable here

TacticTable – smart technology as a source for team-based solutions in the control room

An interactive touch screen integrated into a desktop solution – this approach to promoting constructive, team-based security activity is becoming increasingly important in the control room industry. Yet when looking for practice-oriented models that offer more than just futuristic-looking packaging for large LCD displays, the market is reaching its limits. **JST now provides the answer for professional control room applications: the TacticTable.**



↑ **TacticTable:** Whether using applications from the control center or displaying external users - different data can be freely and simultaneously positioned in the desired size.

The idea behind this product: a central node, a smart information hub that can consolidate all of the data from the control room on demand. The goal of this innovative approach to work is obvious – optimized performance based on concentrated mutual incentives. The performance potential and skills of the individual are multiplied by bundling creative solutions in a team.

To achieve this effect, the JST developers designed the TacticTable. This is a technical innovation which, thanks to being fully integrated with the JST MultiConsoling® control system, makes it possible to access all sources and processes available in the control room when required and with appropriate authorization. The comprehensive compatibility with MultiConsoling opens up unlimited flexibility.

- ✓ Access to all sources and processes of the control room
- ✓ Full integration into the MultiConsoling® control system
- ✓ Flexible gesture control
- ✓ The basis for constructive teamwork
- ✓ Secure handling with the intuitive myGUI® user interface
- ✓ Visual signals with the integrated AlarmLight
- ✓ Possibility to display external data

Interactive touch screen makes handling quick and easy

Critical infrastructure or process control system, disaster control or crisis response, training or shift handover - as an interactive multi-touch tool, the TacticTable provides the basis for sophisticated analyses within a selected team. In addition to the control center information, data from external experts can also be easily fed in. Various workstations can be freely and simultaneously positioned in the desired size.

Installed CommandPads create the best conditions for reliable handling via the intuitive myGUI® user interface. Text input is even possible thanks to superimposed keyboards. Users can receive visual signals while working on the TacticTable via the JST AlarmLight, which is integrated into its solid metal construction.

Whether you swipe, zoom, rotate or drag – gesture control elements are as simple as on a smartphone, making the use of the TacticTable effortless for employees. A central instrument that creates new opportunities for communication and thus for team-based decision-making.

Stratos X11

THE OPERATOR'S DESK

The Stratos X11 control room furniture system for years of use in **24/7 operation**.

The professional, modular, robust solution!



Every system hand-made in Germany



Table configurations available in straight and semi-circular layout



ONLY AT
JST

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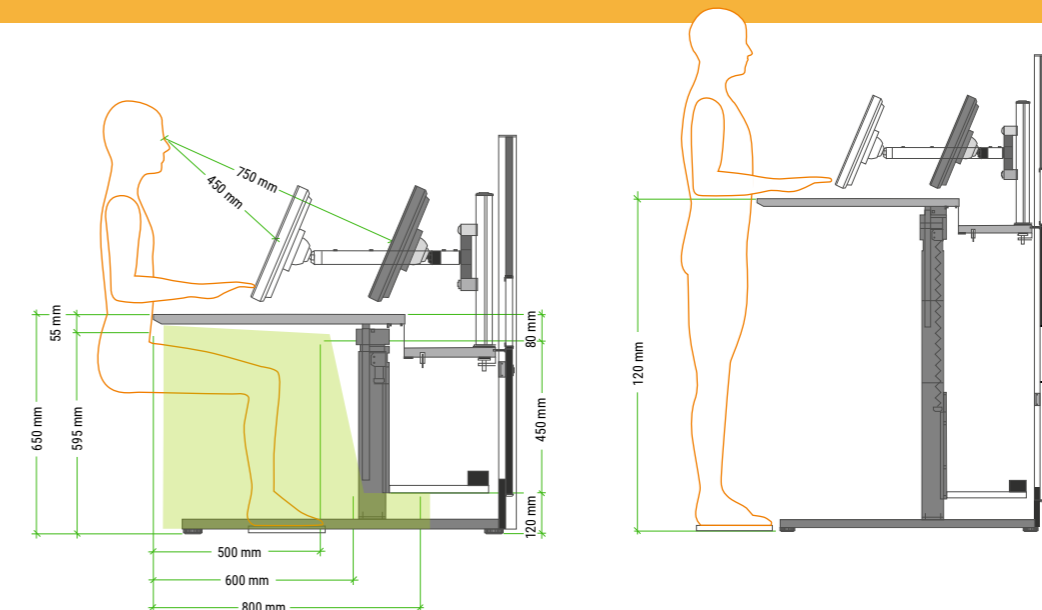
JST Operator Desks: Stratos X11

The work stations in control rooms have to face some tough demands when it comes to technology installation, ergonomics, stability and durability. This is exactly where the Stratos X11 sets new standards, making it the absolute no. 1. Stratos X11 is the professional, modular, robust solution for furnishing your control center, control room and control station. At this point, we would like to present just the most important product features:

- ✓ **Quality and durability: solid and durable for use in industrial control room and control center**
- ✓ **Optional motorised stand-sit height adjustment**
- ✓ **Large illuminated technology area with unrestricted legroom**
- ✓ **Large foot garage for maximum comfort at the work station**
- ✓ **Integrated dazzle-free lighting system**
- ✓ **Sturdy table edge – prevents damage**



Legislators study screen work in control centers: Because it has been active for many years in planning control rooms, JST has a wealth of experience and understands the operators' work particularly well. For this reason, JST supported the Federal Institute for Occupational Health and Safety in its study of "Screen working in control stations". Now you can make use of this expertise to plan your own control room in line with the highest technical and ergonomic standards.



Stratos X11

THE OPERATOR'S DESK



Example: Stratos X11 control room desks in a convex layout with two work stations – made from highly resistant materials specially for the tougher conditions in control rooms.

Height adjustment: When it comes to the health of your workforce. The entire unit can be freely moved to the best sitting or standing height using an electric motor. The height adjustment range is between 65 and 125 cm, as specified in DIN EN 527-1.

For visual and safety reasons, the technical equipment installed in the supply room, including all cables, is always concealed behind a privacy screen, irrespective of the height position of the table top.



Recaro 24

THE OPERATOR'S CHAIR

Headrests that can be adjusted in height and angle of inclination for relaxed working. Optional: interchangeable washable headrest covers for shift operation (hygiene)

Angle of backrest can be adjusted using handwheel on both sides

Individually adjustable lumbar spine support. Use of high-strength materials for the frame and cover (decades of experience in the design and manufacture of high-quality vehicle seats)

Armrests can be folded up, adjustable angle of inclination and tested to maximum load

Optional seat area extension for larger thigh rest

Pump (Airmatic®) for pumping up air cushion in lumbar spine area.

Need more information?

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*Also in 24/7 operation

The ultimate Recaro operator's chair for 24/7 use in the control room

RECARO 24 – the operator's chair that adapts to you. Ideal for 24-hour use in the control room and control station. Because people who spend several hours at a time sitting down and still need to stay physically and psychologically fit make very tough demands on their chairs.



- ✓ Specially made for **24/7 use**
- ✓ **Seat height adjustment** with pneumatic spring
- ✓ **Very comfortable seat** because of firm upholstery
- ✓ **Synchronised setting:** individual weight adjustment facility (approx. 60 – 130 kg, optional up to 200 kg)
- ✓ **Tested to British Standard** expressly for control center chairs in 24-hour use (by LGA Bayern)



AllMedia

CONFERENCE - SYSTEM

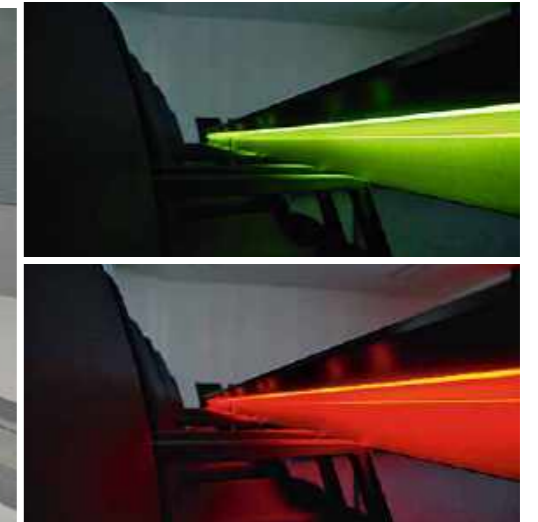
Leading furniture designers have designed this multipurpose table **exclusively for JST**. The combination of shape, colours and materials produces durability plus timeless design.

The AllMedia is vastly superior to traditional conference tables.

The reason? The integrated MultiConsoling® system, through which all sources (such as computers, cameras and television) can be immediately accessed and operated on monitors, large-format displays and projectors.



AllMedia Conference System – attractive, timeless design



Flexible thanks to MultiConsoling®: The MultiConsoling® system integrated in the AllMedia system means that every source – TV, notebook, workstation or DVD player – is available immediately everywhere, even in different rooms or locations.

AlarmLight – the event-controlled light signal: This system dramatically increases the level of attention to critical alarms.

Secure: Even occasional visitors to the conference room can operate the MultiConsoling® system quickly and intuitively, without previous training.

A safe investment: Even the most complex technology can be integrated without compromise and is prepared for future changes.

Expertise from one source: DisplayWalls (large-format systems) can also be combined visually and technically using the AllMedia concept. JST can install the right DisplayWall at the same time.

Need more information?

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Conference tables for:

- Situation centers
- Deployment centers
- Crisis teams
- Restart rooms
- High-quality meeting rooms
- Training rooms

Control Room Furniture

Whether it's a crisis/conference table, sideboard, display wall cover or cupboards – we'll take care of all of it!

Control center furniture to match your corporate design

The **Stratos X11 Control Room Furniture System** is the professional, modular, robust solution for furnishing your control center, control room and control station. We can furnish your control room and your meeting room in your own individual corporate design.



Elegant coverings for display walls and clean installation

We cover your display wall system to go with the room furnishings. The cover can also be supplied in an acoustic version if required. This means that noises from the large-format display will not reach the control room. In addition, the noise level in the entire control room is lowered.



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Wall cupboards

The wall cupboards are adapted to the **design of your Stratos Command-Desk**. The functions and interior fittings of the cupboard systems are planned individually for you.

Storage lockers

The storage lockers hold **lockable drawers** which can be placed under the table top of the Stratos CommandDesk. The lockers are designed for shift workers so that every can access the personal items securely and quickly right at the work station.

Functional furniture

We provide your control room with functional furniture to meet your individual requirements. What makes it special: To create a completely quiet working atmosphere, not just the wall surfaces but also the furniture is clad with **sound-absorbent material**.



The control room furniture factory "Made in Germany"

JST's furniture items set new standards visually as well as practically. In our affiliated furniture factory, the top priority is not only using the best possible materials; design aspects are also of crucial importance. And it all bears the label "Made in Germany" – by specialists for specialists.

Individual and practical in an appealing design

We aim to supply made-to-measure cupboard solutions – customised completely to your requirements – so that we can offer practical solutions for everyday shift work in your control room. At the same time, we hope that your furniture components will complement the visual appearance of your control station. You'll be amazed at what's possible.



OPAL X11

OPERATOR ACOUSTICS LIGHT

The creative, practical solution for improving noise levels and lighting in your control station – attractively and effectively!



Need more information?

Call us on

 **+49 4161 – 54044-0**

or visit our website!



OPAL X11 – a new level for the operator work station

Extensive, clearly structured spaces, a clean atmosphere and, usually, high reinforced concrete ceilings – the classic picture of a modern control room. What often makes this concept problematic in reality is the **level of noise**. JST has picked up the challenge of finding an alternative to the costly option of using a complete acoustic ceiling: “OPAL X11” is a component that takes the operator work station to a new level.

In close collaboration with experts in the fields of spatial acoustics and lighting design, the control room specialists have developed the “Operator Acoustics Light – OPAL X11”, a ceiling sail that is adapted spatially to the operator desk and is attractive in more ways than one.

OPAL not only effectively lowers the noise level. An integrated HCL (human centric lighting) light source, i.e. a form of illumination that takes into account the visual, emotional and biological effects of the light, **and the colour values of which affect concentration and performance**, makes this system uniquely attractive particularly for shift work in control stations.

A further advantage of the system: OPAL is linked with the JST myGUI®. That means that, in the case of an incident, the integrated **AlarmLight** is illuminated or flashes, depending on how it has been preset. The operator’s attention is drawn to an event, not just visually but also via an integrated audio component.

- ✓ **Easy installation and manageable budget**
- ✓ Insulation material with absorption of α_w 0.80, i.e. **80 percent of spoken noise is absorbed**
- ✓ **Flexible design options** to suit individual needs
- ✓ Integrated HCL (human centric lighting) **improves concentration and performance**
- ✓ Developed on the basis of **occupational health requirements** for shift operation in control rooms
- ✓ Integration of visual and acoustic **alarm systems** (including third party systems)



The advantage for the operator

The OPAL X11 ceiling sail gives clear added value to the operator’s work station. Alongside sound absorption and the individual adjustment of the lighting, the element has another advantage: The integrated audio system can be activated both via the myGUI® cabling and also, as an option, via Bluetooth.

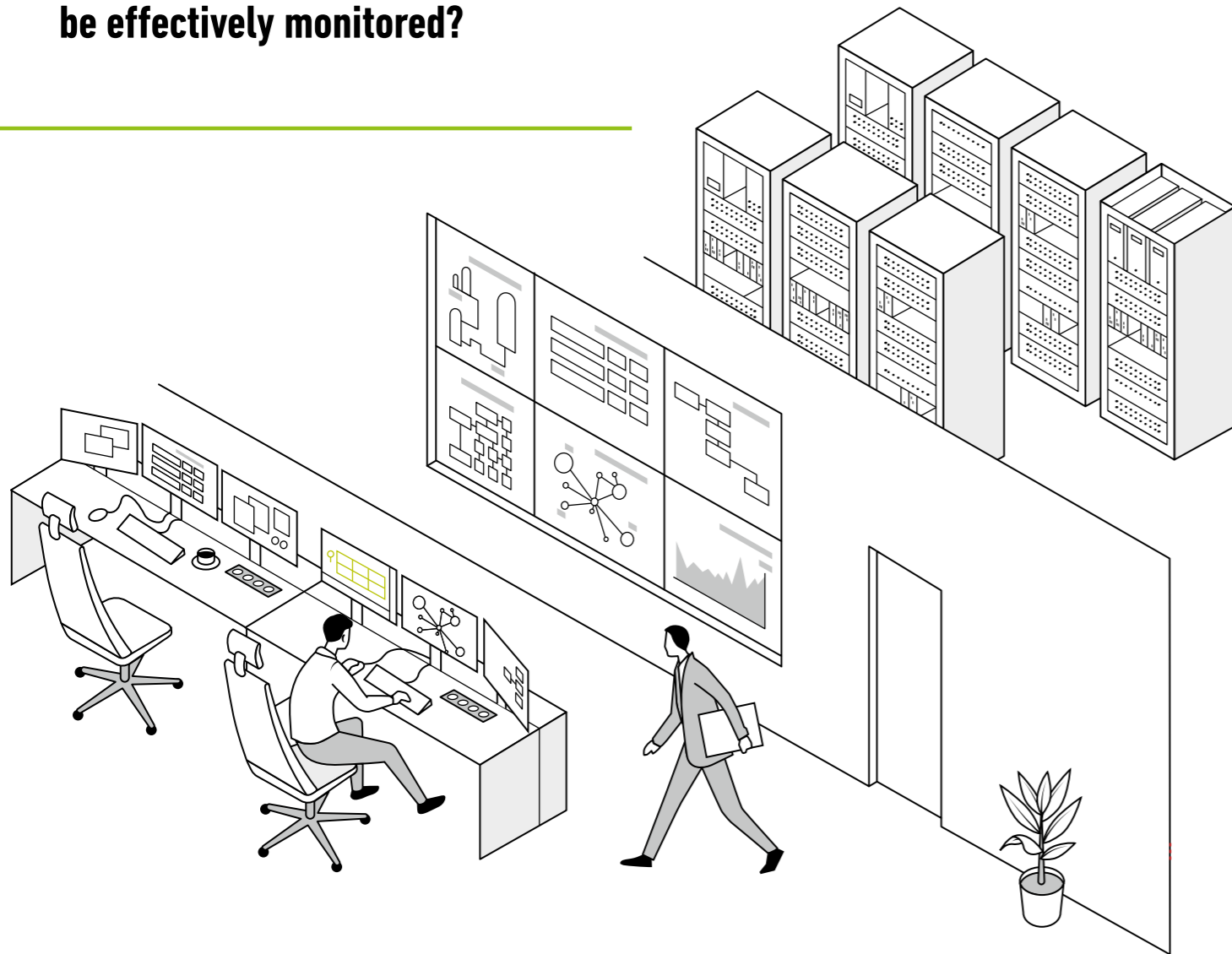
Knowing what’s coming

Thanks to the professional software, the effectiveness of the Operator Acoustics Light can be determined before installation. It is thus possible to define beforehand what improvements in room acoustics will be achieved, i.e. how high the absorption will be before and after installation of the ceiling sail.

PSM: Proactive System Monitoring

Your new control room houses all sorts of equipment: displays¹, MultiCenters, MultiConsoles, grabbers, myGUI[®] controllers, CommandBoxes, redundancy/backup modules and more ...

How can this control room technology be effectively monitored?



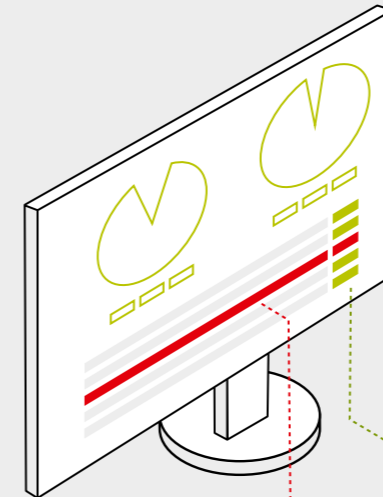
We think of everything and have the right answers!

Our professional **PSM system** can monitor all your control room technology – **proactively!** We can discover defects, irregularities and wear **before** any faults arise, and can take the necessary measures.

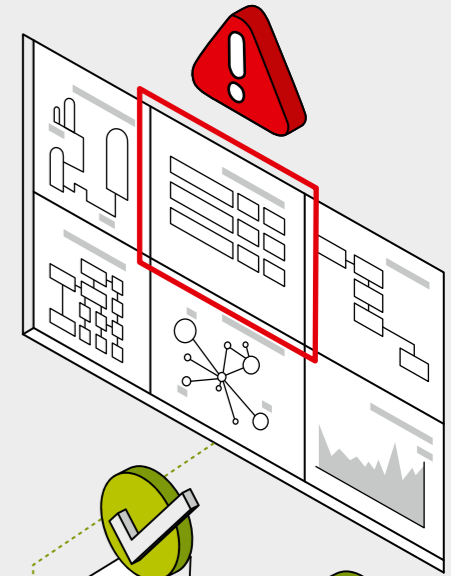
PSM works simply and efficiently:

1

myGUI[®] software with optional PSM module² is connected to the devices in your control room.



The PSM module constantly checks the status and diagnosis data of all devices:



2

PSM sends the information about the faulty device in real time to **your server**. This in turn forwards the information to the **JST server**³.



3

PSM interprets the data and, if necessary, triggers actions which have been defined in advance. **JST Service takes action!**

Need more information?

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1) Possible with most displays, depending on model type. 2) Available from myGUI Version 3.0, rev. 1.350
3) If no data transfer to JST is required, the PSM server can also be installed "on premises" at the customer's location. Monitoring is then carried out by the customer.

FREE

Online control room analysis – how fit is your control station?

Would you be interested in finding out the improvement potential of your control room and making best use of your resources and opportunities? JST offers **free advice and analysis for your control room, control station, control center and control point.**

- ✓ How do you assess the **room conditions**?
- ✓ What **ergonomic requirements** do the work stations meet?
- ✓ What **technical equipment** for the work station do you use?
- ✓ How do you rate **ease of operation**?
- ✓ ... and lots more aspects of your control room



Are you interested?

Then request your personal, free access code now!
Please tick "Free Potential Analysis" in the contact form!

www.jungmann.de/kontakt

CONTROL ROOM SIMULATOR

Experience tomorrow's work station standards today: innovative large-format screen systems and their control, MultiConsoling®, PixelDetection®, CockpitView, Stratos X11, intuitive touch-screen operation, the latest security concepts, interactive conference table, creative lighting design, acoustic concepts, etc.



ON SITE

TacticTable
CONTROL THE SITUATION



Book a workshop now!

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Use our **remote workshops** for turbo entry into the JST control room world - without travel time.

On-site appointments can still be booked as well.



VIRTUAL

Having a vision of the future is good. Experiencing it is better!

Off we go on a big-screen hunting.

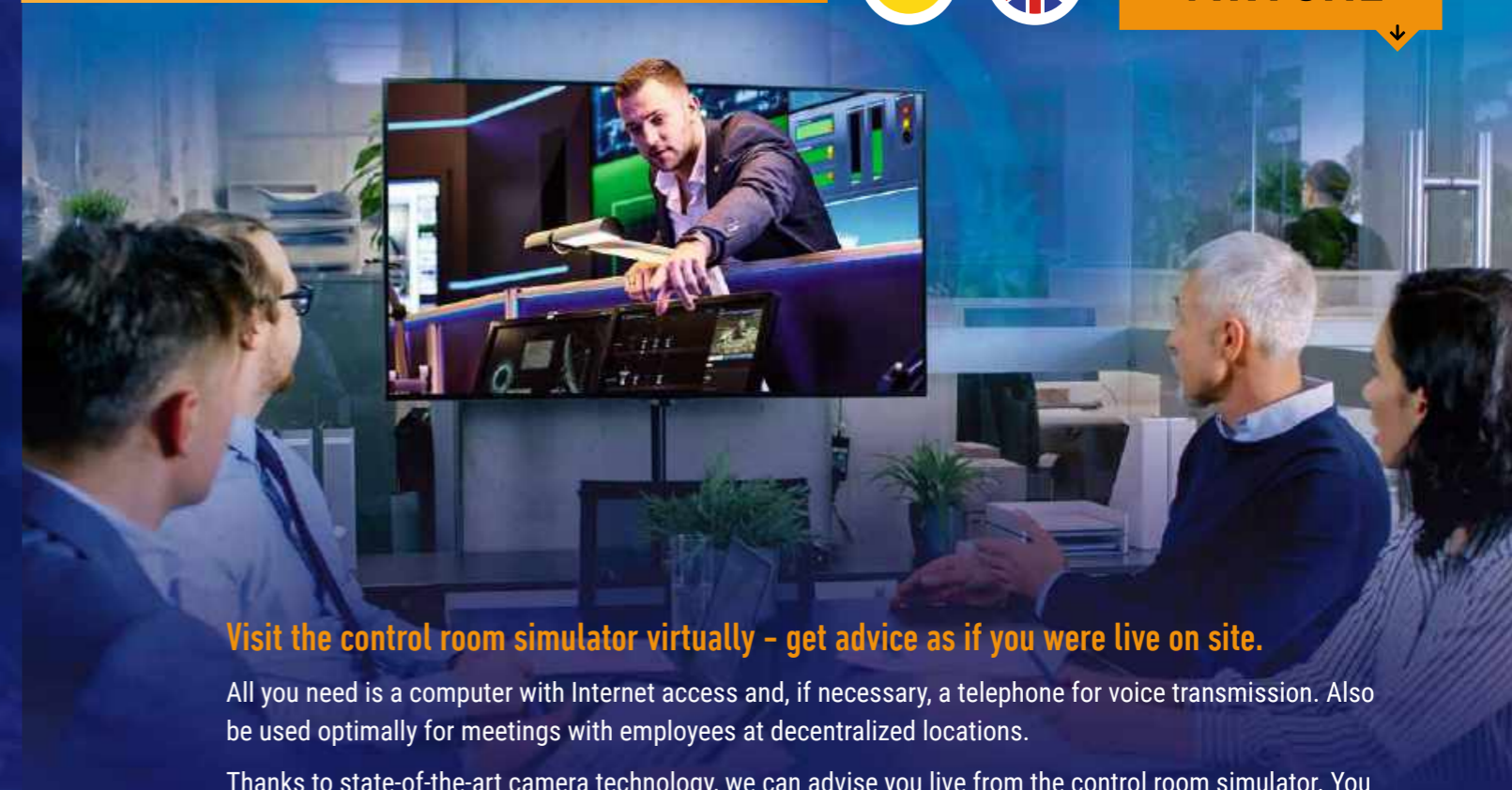
Take a look into the future and see the latest large screen technology. From the interactive Multi Touch Screen to the DisplayWall, you can expect technology at the highest level, of course also in terms of software. Our JST-PixelDetection® software shows you the automated alarm activation on the large screen wall. The alarm and management tools you use are only displayed when they require your attention; reaction times are drastically reduced!

Enjoy your new freedom.

In the Control Room Simulator you can actively test the flexible workstation interconnection Multi-Consoling® and experience the advantages close up.

Discover unimagined comfort.

Test smart solutions for team-based control station activities: Specialized furniture such as the Stratos X11 control room desk, operator chairs for continuous 24/7 continuous operation or the new Tactic-Table. Discover acoustic large screen wall cladding, ConferenceDesk with various PC connection interfaces, meetingpoint and much more.



Visit the control room simulator virtually - get advice as if you were live on site.

All you need is a computer with Internet access and, if necessary, a telephone for voice transmission. Also be used optimally for meetings with employees at decentralized locations.

Thanks to state-of-the-art camera technology, we can advise you live from the control room simulator. You and your team experience an online tour of our control room simulator with our experts - also in parallel from variable locations, in German or English.

Guides, checklists, practical examples, solutions, and specialist articles on setting up your control room, control station, control center and control point

**I WOULD LIKE TO KNOW MORE ABOUT
"THE GREAT PRACTICAL BOOK OF CONTROL ROOMS"**



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