
SmartLink™ Remote Services

The future of magnet system maintenance

With the remote maintenance services of SmartLink™ we supplement our generation of modular control units SmartPick™ by introducing an innovative component. SmartLink allows us to offer you a range of different services:

- Real-time remote diagnosis
- Technical support
- Remote access to your magnet controller
- Feedback on maintenance and repair
- Periodic checking and backup of system data



Figure 1: SmartLink remote diagnosis shrinks the world

Innovation pays off

Breaking new ground

Manufacturers of industrial controllers are increasingly eager to offer remote access to their products.

A traditional solution, using outdated technology, is to use a dial-up wired connection over the telephone network to an analogue modem installed in the controller cabinet.

Another common approach is to incorporate a mobile radio interface directly into the controller cabinet. However this needs a mobile phone contract which leads to unnecessary and recurring costs.

With SmartLink, TRUNINGER is taking a different route.

SmartLink - The TRUNINGER solution

Bluetooth technology is used to provide the local part of the Internet connection between your SmartPick magnet controller and the TRUNINGER Server.

In addition to laptops and tablet based devices, SmartLink supports Bluetooth-enabled mobile phones, as well as the iPhone or Android devices like those from Samsung™ or HTC™.

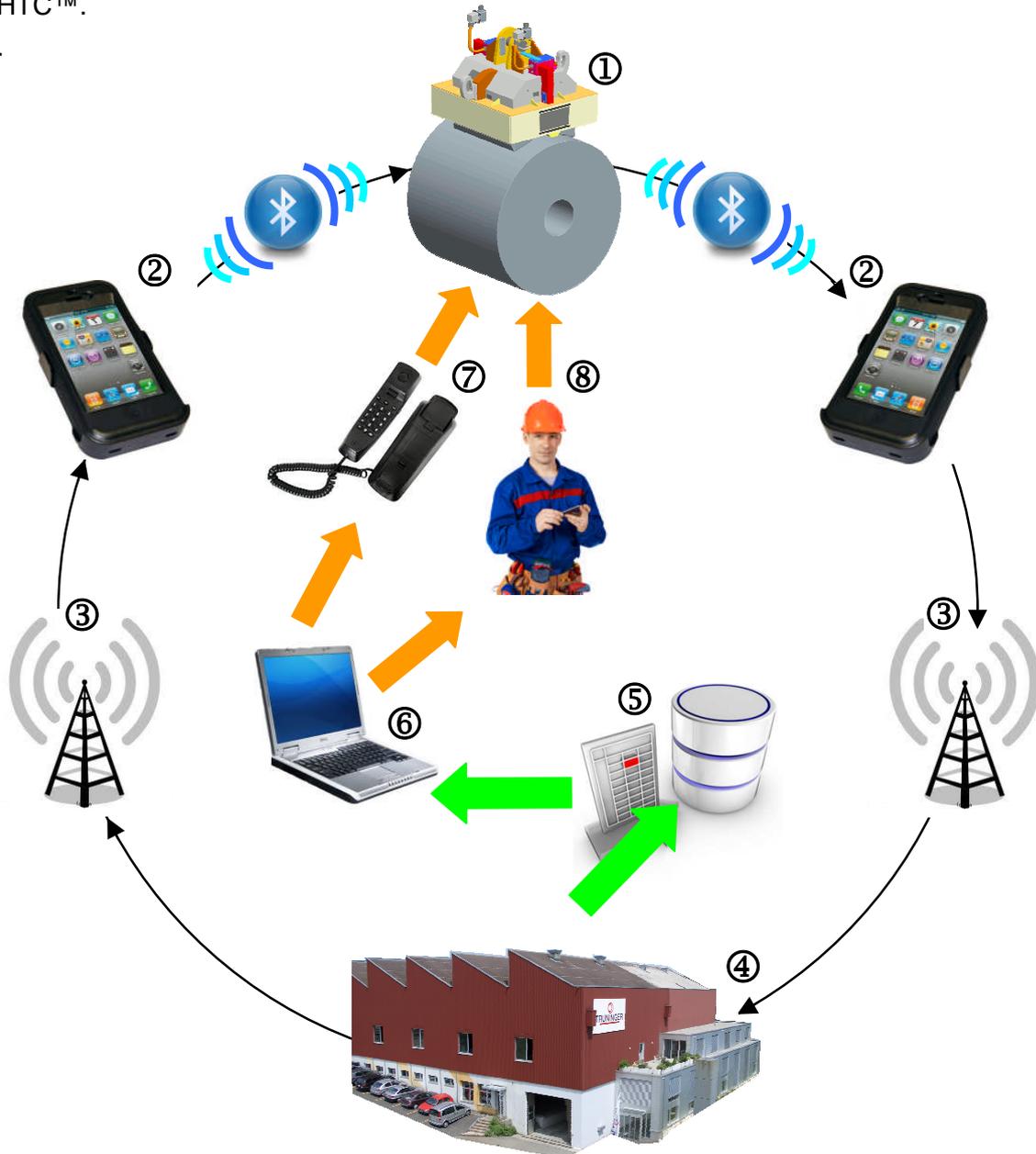


Figure 2: SmartLink information flow

- | | |
|--|-----------------------|
| 1 Customer | 5 Server, file system |
| 2 Customer mobile phone | 6 Customer service |
| 3 Internet connection | 7 Telephone support |
| 4 TRUNINGER support centre | 8 Service technician |
|  TRUNINGER automatic data transfer | |
|  Communication/TRUNINGER support → customer | |

SmartLink is initiated by the magnet system controller which automatically sets up a call via your mobile phone to the TRUNINGER server.

The connection status, progress of the data transfer and successful transmission are indicated on the display module InfoPick™.

Once the connection to the server is set up:

- diagnostic data is transferred to our support centre and an alert message is automatically sent to customer service
- a TRUNINGER service technician can directly access your SmartPick magnet controller and begin diagnosis of the fault



Figure 3: Setting up a SmartLink connection using a mobile phone

Less cost, more support

A key aim of SmartLink is to reduce potential downtime to an absolute minimum thus maximising availability of TRUNINGER magnet systems.

With periodic remote diagnosis, we can keep you informed about the actual operating condition of your magnet systems. This data enables optimisation of maintenance activities, provides feedback concerning possible imminent repair jobs and can also ease legal compliancy issues with local regulations.

Easy implementation

- Initial configuration as per installation manual or done by TRUNINGER service technician
- No intervention needed in your IT infrastructure and therefore does not affect your company's internal security policy (firewall configuration)
- Instantaneous connection and automatic data transfer within minutes

Additional benefits of SmartLink at a glance:

- No additional investments needed
Existing, proven technologies are used (laptop, tablet, mobile phone, Bluetooth)
- No additional hardware needed
SmartLink is already included in the SmartPick Advanced Tool kit
- No special phone contract needed
Use the existing mobile phone contract of your company phone
- No country-specific telecommunications features required
SmartLink's standardised telecommunications protocols guarantees seamless international operation
- Efficient "first aid"
Remote diagnostics and customer support without the need for a service technician on site

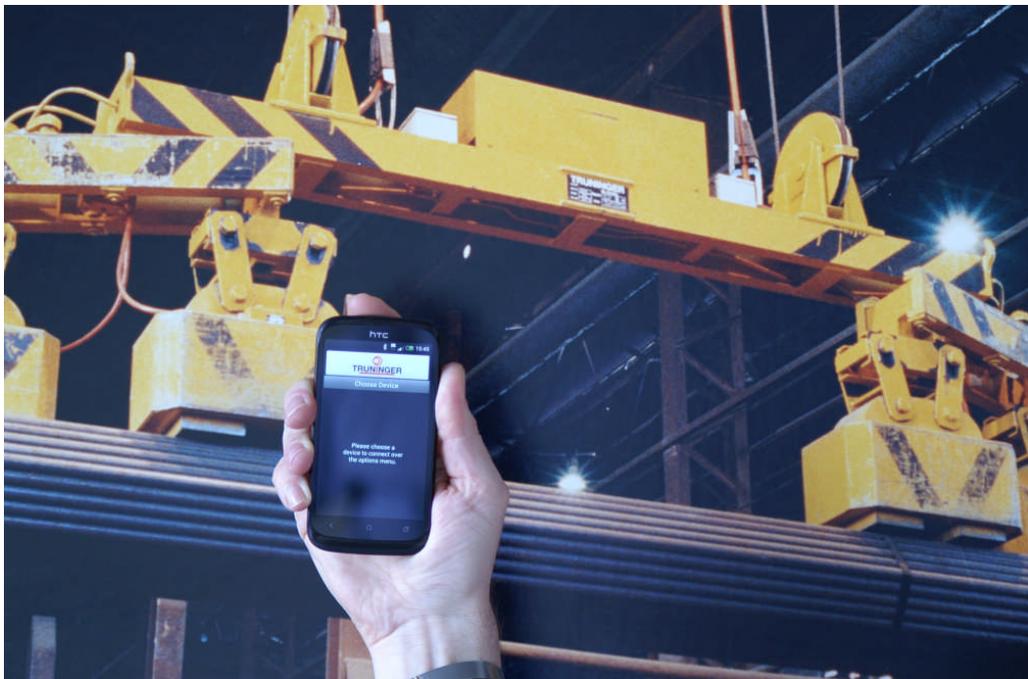


Figure 4: Wireless communication with a magnet system