RCS-ALEA: Back-up for any incident.
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RCS-ALEA (ALARM AND INCIDENT ASSISTANT) SIGNIFICANTLY REDUCES THE COMMUNICATION FLOOD. ALL DECISIONS AND LOCATION IMAGES WILL BE COMMUNICATED IMMEDIATELY, APPROPRIATELY AND CUSTOMIZED.

The alarm and incident assistant is available for all Switzerland-based infrastructure operators (IOs) and railway undertakings (RUs) involved in the production process.

ALEA significantly improves communication in cases of disruption and is designed to interact smoothly with the Rail Control System (RCS). The amount of information that needs to be processed in the event of disruptions to rail operations is extremely large. The difficulty for those involved is to address the highly complex content appropriately. RCS-ALEA channels this case-specific information and distributes it extremely rapidly. Sophisticated filtering and distribution functions help to make the huge quantities of data involved a useful work aid rather than a burden. If an alarm of the emergency forces is necessary, ALEA supports the co-operating in this job reliably and shortens the alarm chain.

RCS-ALEA is a tool that has been specifically developed to meet user requirements. It supports all those employees who are involved in rectifying irregularities and disruptions to rail operations such as train cancellations, re-routing, arrangement at short notice of necessary trains, turnarounds, changed use of vehicles, changes of commuter service, changes of formation, stabling/obstruction, passenger guidance, missing scheduled stops, unscheduled stops.

Facts and figures.

- Number of registered users: 5,500
- Number of users at a time: 500
- Processes around 14,000 cases (incidents) a month
- Defines around 32,000 measures a month
- Communicates around 44,000 reports a month
- Sends around 450,000 SMS reports relating to incidents
- Publishes around 230 operating concepts and 2,700 instances of passenger guidance from the 530 concept templates available in the event of an incident
- RCS-ALEA processes around 15,000 follow-up queries a month
RCS-ALEA: Back-up for any incident.
RCS-ALEA: the communication tool.

ALEA offers comprehensible and traceable information management by:

- Logging the entire flow of information, complete with version details during an event.
- Enabling users to filter information that is not relevant to their role or geographic region.
- Allowing users to subscribe to what interests them
- Ensuring the creation of cases and measures is highly efficient because recipients do not have to be directly addressed; they receive what they are registered to receive.

Reducing communication times and supporting concept development for eliminating disruption using ALEA.
ALEA: a tool for communication during a disruption.
• Distribute clear and correct disposition measures to all the necessary places just once.
• Send open, transparent information about the "disruption plan", the measures to be taken and their status to all of the parties involved.
• Allocate roles openly and without bureaucracy, including contact options, for the targeted flow of information to the responsible people.
• Ensure roles and responsibilities are allocated clearly in the event of a disruption to avoid duplications.

ALEA supports the conceptual work of incident managers with relation to train disposition, passenger guidance and rail replacement services.
• Makes information held in each location’s checklists (OCLs) electronically available.
• Produces concepts tailored to the situation based on the OCL.
• Adaptable, diagrammatic concepts for trains, passenger guidance and rail replacement services.

ALEA as a “leader in record-taking”.
• ALEA reduces duplications when recording incidents.
• Produces incident checklists (ECLs) from the information collected in ALEA, RCS-D and SIP.
ALEA disseminates and processes information.

Dissemination of information via:
- an intuitive Graphical User Interface (GUI)
- SMS
- Pager
- PDF
- Alerts in Windows taskbar
- Graphical contingency planning

Traceable Case Management
Unread updates are in bold. The unread count is always prominent.

Graphical Passenger Contingency Plans

Versioned Graphical Contingency Plans

Traceable Intervention Management
Edits to measures are versioned. Measures that have not been read are in bold. Measures and cases are filtered so that the user only sees what is relevant.
Disruption management through contingency planning.

A CONTINGENCY CONCEPT IS A SEMI-FORMAL GRAPHICAL LANGUAGE THAT DESCRIBES A DISRUPTION, ITS TOPOLOGY, THE TRAINS INVOLVED AND INTERVENTIONS THAT CAN BE USED TO REDUCE THE IMPACT OF THE DISRUPTION. IT IS A TEMPLATE FOR A CASE.

The contingency plan involves using the template. When an incident occurs, the contingency plan is graphically adapted to the specific case, given a time window for activation and then sent to the ALEA user.

From a contingency plan, measures can be automatically generated that are consistent with the current train timetable.

Graphical Editing,

- The measures can be edited directly in the graphic by means of drag and drop.
- Nodes can also be added and moved by direct editing.
- All operations can be undone and redone.
- Measures can be activated and deactivated with one mouse click.
Case.
To deal with an incident, you have to open a case. All measures and reports are linked to a case. Cases can be viewed, processed, summarised and searched with a full-text search function.

Measures.
Every measure is linked to a case. As soon as the train number is entered, ALEA compares these with the timetable and fills in the fields. This is efficient and prevents user errors. ALEA uses the defined regulations to fill in the dialogue fields automatically wherever possible.

Amended measures are marked as invalid and replaced with the latest version. The sequence of changes is recorded for clarity and traceability.

If the train number is entered correctly, ALEA recognises the train’s exact route. If the train number is not available, the shortest connection between two points can be calculated using graph logic.

Technical description.
ALEA relies on the technical infrastructure of RCS-Dispo. In particular, it reuses the process framework and client workbench as well as some services (e.g. authentication). Similar to RCS-Dispo, ALEA is being implemented as an Eclipse RCP fat client or a Java application as a server process, with communication taking place using Tibco RV as the messaging middleware. The application is designed for high availability and also uses exactly the same mechanisms as RCS-Dispo.