The MTU Callosum_DC BDCS Battle Damage Control System ensures the precise localization of any type of combat or non-combat related damage, caused by fire, flood, collision, grounding etc., shows the current inner tactical scenarios and optimizes operative and rapid access for prevention and recovery (look, decide, react).

Benefits

- Visualizes a clear view of the ship's condition
- Situation management
- Supports an easy and safe access by MTU-3 click method
- Tailor-made engineering according to customer requirements
- Shows 3-D isometric deck views
- Command-state boards
- Plot functions manually/automatically

Static and/or dynamic automated Kill Cards
Check- and Task lists
User management
Compartment status overview
BDCS-software embedded in MTU Callosum_MC
BDCS tailor made up-grade for ships in service

Visualization example:
Command State Board

Deck view with plot symbol

MTU Callosum_MC structure with MTU Callosum_DC extension

Application

MTU Callosum_DC assists the ship’s Damage Control Officer during damage-control operations to make correct and fast decisions for the various adapted systems.

MTU Callosum_DC optimizes by using clear and ergonomic visualization software together with the MTU-3 click- method, quick navigation within damaged zone to the related location, operative and rapid access for damage prevention plus giving the basis for starting controlled inner-defence activities.

The system supports remote operation as required and displays reports, warnings, status and analogue information etc., of the ship. Layers with optimized information plans such as life-saving, fire-fighting control, emergency plans, etc are available. It also integrates ETR (Estimated Time to Repair) as well as ETBOL (Estimated Time Back on Line) status.

BDCS viewing is available at any operator station, with functional operation, and password protection.
Example: BDCS Operating Concept

Each operator can view all the information on the BDCS and be able to trigger all actions by trackball clicking on the soft-key buttons. This makes it possible to rapidly and safely detect damage and start controlled inner-defence activities.

The plot board is the central tool for damage control and reduction. It makes use of the ship's plans when organizing the information. The operator can indicate dangerous situations on the plot board using plot symbols; as well as the automatic plot function setting can be selected. The progress of damage-reduction control, for the respective ship-damage incident, can be documented using these plot symbols.

Plot Symbols

The symbols show an example solution. Other kind of symbols will be implemented according to customer requests.

Example symbols show:
Fire detected and successful extinguished.
Fire-guard deployed.
MTU Callosum_DC also includes the following benefits and can be extended, for further areas, according to customer requirements:

**Benefits**

- Visualization of hazardous informations
- Personnel management
- Personnel localization and identification
- Fully-embedded CCTV support
- Resource management
- Visualizes smoke and fire boundaries
- Visualizes flood boundaries
- Displays attack routes
- Cooling action management
- Can be combined with the MTU Callosum_TS OBTS On-Board Training System
- Integrates interfaces of extended systems
  - etc.

Further command state board features and definitions according to requirements are available. Information will be visualized on a „BDCS Information Table (Overview)” and permits direct access to the customized (soft key) buttons.

**Benefits**

- Electrical Emergency Supply Board
- Electrical Main Supply Board
- Ammunition Board
- Wash Down System Board
- NBCD Systems Board
- Sprinkler Systems Board
- Flooding Board
- Sensor Status Board
- HVAC Condition Board
- Location and number of life-saving equipment
- Location and number of fire-fighting equipment
  - etc.

**Kill Cards**

Static and/or dynamic automated Kill Cards are available for the operator's rapid decision making, plus rapid readiness-restoration functions for the adapted systems, in case of downtimes and damage situations (according to customized inputs).