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Sistemi Integrati
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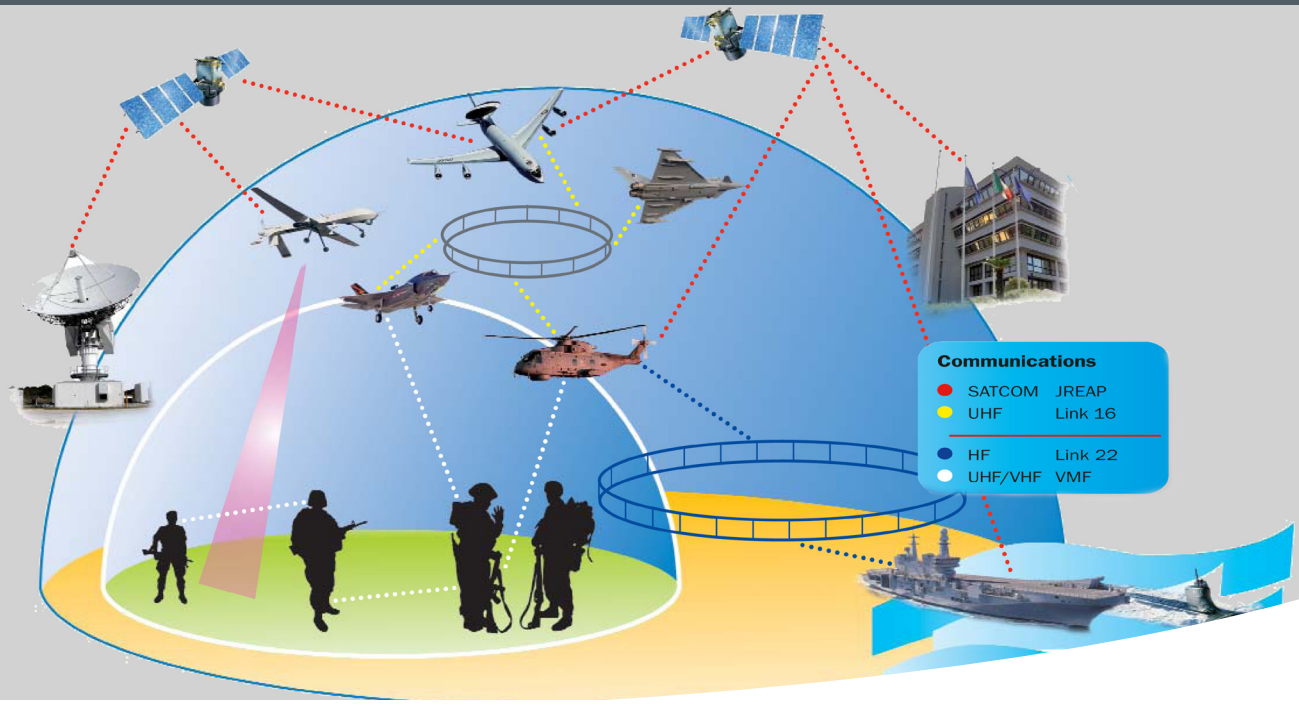
Predictable results
for unpredictable threats



M-DLP®

MULTI-DATA LINK PROCESSOR

M-DLP® is the Tactical Data Link (TDL) management solution, delivering broad interoperability and guaranteed high flexibility, as well as low integration and life - cycle maintenance costs.

Users from different national and international forces benefit from a shared real-time tactical picture achieved through integration with Command & Control and Weapon assets. The compilation of tactical pictures, shared among force participants, is carried out through TDL, which provides real time tactical data exchange among different Units in an operational scenario.
The interoperation capabilities of TDL underpin guaranteed situation awareness for operators: a detailed, well-timed and widely-shared tactical picture is the key factor in decision - making process, especially in joint/coalition operations.
In order to solve these problems, SELEX Sistemi Integrati has developed the M-DLP system, which can provide broad tactical interoperability among different data links.

THE SYSTEM

The M-DLP is an interoperable, scalable multi link integration solution for warships, aircraft and ground infrastructures supporting C2 and non C2 nodes.
Specifically, M-DLP supports data link protocols and standards including Link11-A/Link11-B, Link16, Link22, JREAP and Variable Message Format (VMF).
Among its main functions, the M-DLP:

- manages data link terminals for initialization purposes and to visualize their status through dedicated interfaces
- manages the access and participation of own unit in one or more data link networks based on a specific network plan
- transmits and receives data link messages in compliance with STANAG standards
- provides a normalized tactical data base built from information provided by participants in all active networks
- executes correlation and conflict resolution algorithms
- works as Concurrent Interface Unit, Data Forwarding Unit, or Single Interface Unit, according to specific operational needs
- supports multiple instances of the same link
- filters the information exchanged.

The M-DLP can be fitted with an optional Multi Domain

Situation Awareness Tactical Display, which supports 2D/3D representation and integrates state of art GIS capabilities. The M-DLP features a modular design, allowing new components to be easily pluggedin.
The M-DLP architecture consists of a set of core processing modules shared by all supported and/or supportable data links, together with data link specific processing modules, a Data Forwarding and Routing engine, and a Common Host Interface to enable integration with any type of Host System. The M-DLP can be directly integrated into interoperability test scenarios through the native Standard Interface for Multiple Platform Link Evaluation (SIMPLE). The M-DLP also includes an embedded training/simulation capability through a standard DIS/HLA interface. Its modular architecture makes the M-DLP a highly expandable system, allowing it to be used outside NATO nations by adding specific modules.
The M-DLP can operate according to two integration options:

- as a stand-alone system, transmitting own unit information, receiving data from other units, and acting as a forwarding/routing node;
- as an integrated system, interfacing with its own unit's Host/Mission System in the normal operational context, embedded in the Host Processor or through a Dedicated Processor.

TESTING ACTIVITY

All M-DLP Systems delivered are tested to meet STANAG and Customer requirements. System and Integration Acceptance tests are usually carried out both at the Data Link Test Laboratory and at the Customer's final installation site.

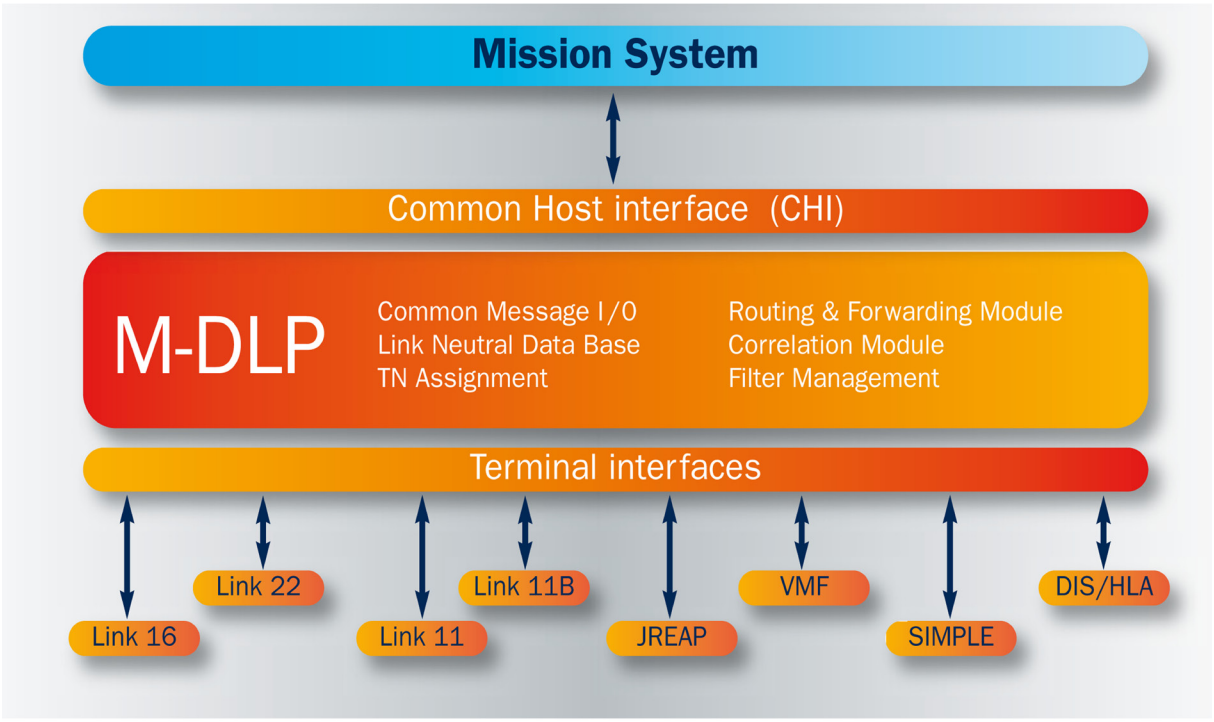
The Data Link Test Laboratory provides Customers with best-of-breed Data Link Testing technology to guarantee the shortest possible integration time. As a complement to the TDL offering, SELEX Sistemi Integrati has also developed the LEnS (Link Enterprise Services) product, to verify the interoperability requirements of geographically distributed tactical data links through a simulated environment.

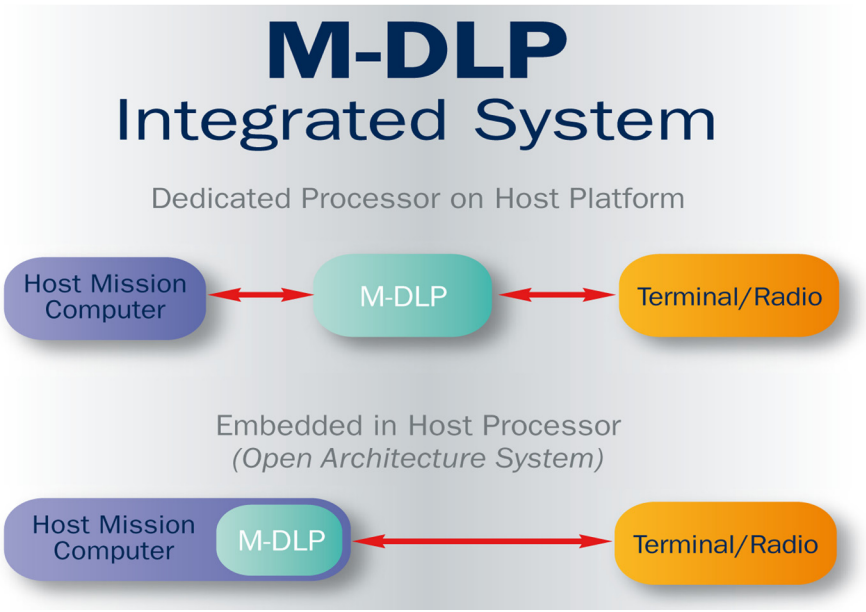
CONFIGURATIONS

M-DLP can be supplied in the following configurations, depending on the application environment:

- Naval M-DLP: characterized by hardware components and an architecture suitable for installation on ships. It comprises an M-DLP Naval Cabinet and a Technical Console Unit -TCU - (a unit with display and system remote control) as an additional component.
- Expeditionary M-DLP: developed for use at ground sites (e.g. shelter, command post), it includes the M-DLP Cabinet and the MIDS (Multifunctional Information Distribution System) Terminal Cabinet.
- Avionic M-DLP: developed for full integration with on board avionic C2 systems.

M-DLP is also available in a Portable M-DLP configuration for installation on commercial or rugged PCs, to improve mobility and support testing phases.

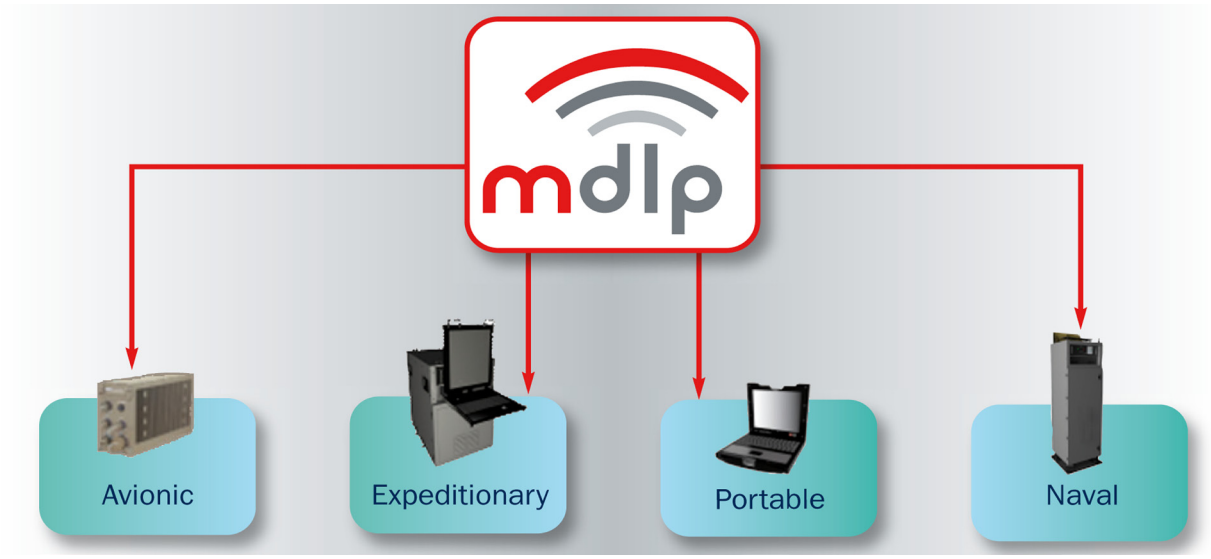


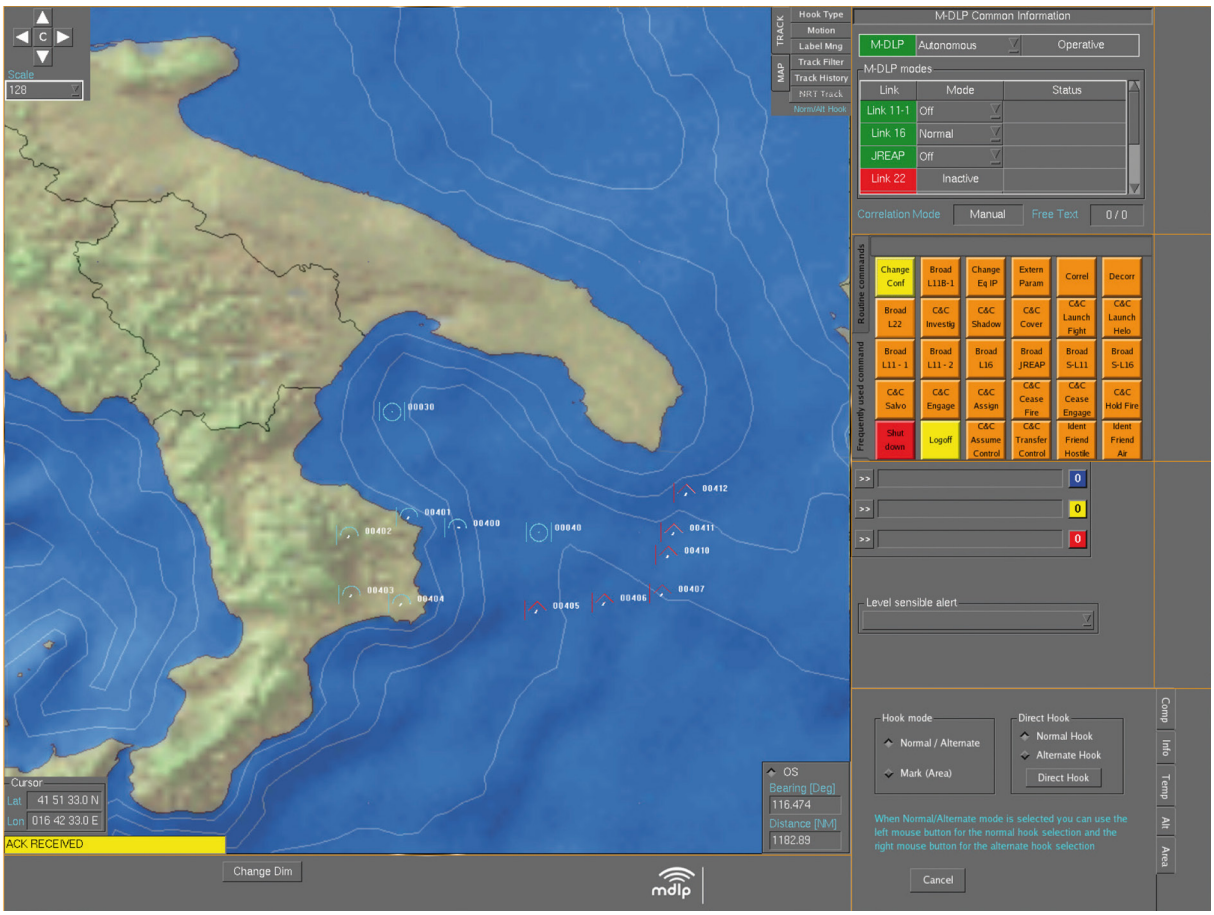


EXPERIENCE

M-DLP origin dates back to the 1990s, with the development of software systems relating to the Data Link Processor (the core information management software in the data link network) to implement Link 11 for the Italian Navy helicopter EH101.
The Data Link Process contributed to the main Italian and NATO programs, including the Italian Navy helicopter ASW NH90 and the NILE /Link22 program.
The development of the JREAP (Joint Range Extension Application Protocol) for the Italian Navy Horizon Program and of the entire tactical data link capability (Link11- A, Link16, Link22, JREAP) for the Italian Navy's Cavour CV, drove towards the current M-DLP, as a further improvement of the Data Link Processor.

So far, M-DLP has been integrated in top Italian Ministry of Defence programs, including Etna Ship retrofit, Mimbelli Class Destroyers refurbishment, Italian Navy FREMM, and Italian Air Force Radar Control and Report sites (GRAM). In addition, M-DLP has been selected for the NATO ALTBMD Program. Since 2007 the M-DLP has also been used during the annual NATO Coalition Warrior Interoperability Demonstration (CWID) tests on tactical data link interoperability at Lillehammer (Norway).
Developed with cutting-edge technology, M-DLP is constantly upgraded in line with evolving customer requirements and new NCW/NNEC (Network Centric Warfare/NATO Network Enabled Capability) concepts.
Latest steps include the development of an avionic M-DLP configuration, designed specifically to interface with on board Command & Control systems, providing aircraft with additional net-centric capabilities to support modern joint operations more effectively.
Another focus for innovation is information availability. In fact, the M-DLP roadmap includes integration in strategic networks to provide IP-Based Non-Real-Time information services using cutting-edge technology as SOA (Service - Oriented Architecture).





KEY FEATURES

A decade of experience in major national and NATO programs, participation in interoperability exercises, system reliability and flexibility, a broad range of configurations, and the availability of complementary systems: this is the essence of M-DLP.

Flexibility: M-DLP can manage several networks that use either the same or different Data Link protocols, allowing multiple operational contexts to be managed by a single platform. M-DLP also supports the most common operating systems (Linux, Windows, Solaris, Integrity).

Ease of Integration: M-DLP can be integrated with minimum impact on C2 Systems, through a specific interface (Common Host Interface) designed to provide all services needed to cover the exchange of tactical data and orders.

Scalability: M-DLP is a modular system in terms of both functions and hardware components. Different Tactical Data Link protocol/functionalities can be added according to customer needs.

Security: M-DLP makes it possible to implement the Community of Interest (COI) principle, for the purposes of exchanging information among a selected group of units which share the same mission. The M-DLP system is currently in the Common Criteria (CC) certification process with the Italian CEVA Defence entity, for compliance with international IT security standards.

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