What is MIMOSA?

MIMOSA™ is a 501 (c) 6 not-for-profit industry trade association, incorporated in California, United States of America, dedicated to developing and encouraging the adoption of open, supplier-neutral IT and IM standards enabling digitalization and interoperability for asset life-cycle management.

MIMOSA standards support key requirements for critical infrastructure management. For example, MIMOSA standards and specifications enable a digital twin to be defined and maintained on a supplier-neutral basis, while also using that digital twin to provide context for big data (IIOT and other sensor-related data) and analytics. The sensor-based flows and analytics include industry-leading standards for Condition Based Maintenance (CBM).

MIMOSA manages the development, validation, and maintenance of a specification for a supplier-neutral industrial digital ecosystem, the Open Industrial Interoperability Ecosystem™ (OIIE™) in cooperation with other industry associations.

The OIIE is defined through industry standard OIIE Use Cases and a standard portfolio of supplier-neutral industry standards. These use cases are specified based on the standard OIIE Use Case Architecture, which captures requirements ranging from a basic user story to the details needed for actual code implementation. OIIE Use Cases are sponsored by individual members or groups of members, thereby spreading the risk and the cost of joint industry projects.

MIMOSA manages the associated OIIE piloting environment using commercial cloud infrastructure, in cooperation with other industry associations, including the industry standards development organizations in the OpenO&M Initiative™. The OIIE Oil and Gas Interoperability (OGI) Pilot is an instance of the OIIE which includes processes, systems and component specifications which are used in both the oil and gas sector and other asset intensive industries. Applications and systems from multiple suppliers are validated to support the OIIE use cases, collaboratively improving the applications, systems, use cases and the associated technical specifications.

ISO TC 184/WG 6 uses the OIIE OGI Pilot in the development of ISO 18101, the asset intensive industry interoperability standard, which is based on the OIIE. The technical reports generated by the OIIE OGI Pilot team are turned into formal ISO Technical Reports which are then used to shape the subsequent parts of ISO 18101 if that is deemed appropriate.

The MIMOSA solutions process seeks to avoid "re-inventing wheels" by leveraging existing standards such as ISA-95, ISO 8000, ISO 15926, and ISO 18435. MIMOSA was an early adopter of XML and is now adding JSON data formats for sensor-based data. The focus is on solving business problems.

An example of an open MIMOSA standard is CCOM – the Common Conceptual Object Model. This standard serves as a data model for the exchange of asset life-cycle information, facilitating standards-based interoperability between systems. MIMOSA also maintains and publishes the Open Systems Architecture for Condition Based Maintenance (OSA-CBM), the main input for ISO 13374.

The list of the open standards already developed by MIMOSA, and available for download can be found on the "standards" tab of the MIMOSA website. The current activities and work groups can be found on the "activities" tab at: https://www.mimosa.org