

MIMOSA OSA-EAI Terminology Dictionary

Version 0.2

Actual Event - An event which has occurred, and has recorded data associated with it.

Agent – An animate object (person, group, organization, or intelligent agent software) that makes various types of assessments.

Agent Role - Defines the agents relationship to the business enterprise (i.e. equipment operator, maintenance supervisor, etc.)

Alarm Severity - Defined severity of an alarm on a scale of 1-10.

Asset – An instantiated entity which can be physically tagged with an asset identifier and/or depreciated by an accounting system. May be assigned to a segment by means of a utilization table to be placed in service. Assets may be systems, subsystems, or components. Assets may be hierarchically related by parent/child tables.

Change Pattern - Qualifies an operational state as stable, unstable, improving, or degrading, at several levels.

Data Quality - Defines if a particular data element is good data, bad data, unknown, or on-hold.

Data Source - Defines the assets used for data acquisition, has an associated data source type (type of data acquisition system).

Entity – Inanimate objects of interest related to the design of a facility (service segment) or the actual objects at a facility (asset).

Health Grade - Defines state of health on a scale of 0 (imminent failure) to 10 (excellent).

Hypothetical Event - FMECA and RCM failure modes and effects are considered as hypothetical events. Hypothetical events have an associated agent and severity code.

Measurement Event - A measurement record which has an associated time, location, location type (type of measurement), transducer ID, data records, and percent confidence.

Measurement Event Numeric Alarm - Tracks the alarm history associated with a particular measurement location.

Measurement Location - Defines the measurement locations associated with particular assets or segments, has an associated location type (type of measurement).

Model - Defines a class of assets as defined by a manufacturer, normally called a "model" of an asset.

Network - Defines connectivity relationships between segments, for example mapping of segments into process flow chains.

Numeric Alarm Regions - Defines alarm parameters associated with a particular measurement location.

Parent/Child - Defines a hierarchical relationship between MIMOSA data elements, applicable to many MIMOSA data types.

Proposed Event - An event which is proposed: to have occurred in the past (root cause assessment), to be occurring in the present (current health assessment), or to occur in the future (prognostic prediction). The proposed event has the following information associated with it: severity level, time it is proposed to occur, proposing agent, a likelihood of occurrence, an audit assessment of the proposal, and associated auditing agent.

Segment (Service Segment) –

A logical entity which is designed to perform a function at a site. Referred to as a "segment" or "service segment". A segment includes production processes, their inputs and outputs, physical structures, systems, mechanical devices, and mechanical device areas. Many of these segments appear on the engineering blueprints of the site. These segments include components which perform a function (Turbine-driven Pump 1A, Motor outboard bearing, etc.) but do NOT describe the particular asset tracked by manufacturer, model number, & serial number in the database. This is done in the asset table. A segment in a plant/process which is a repository for assets, may represent a system or subsystem. Segments may be hierarchically related by parent/child tables, and placed in process flow systems by means of network tables. Some systems track only data tied to service segments such as a machine train (MT #2), but do not tie the measurement data to the physical component assets installed at the time the data was taken. These databases cannot track, for example, a physical motor which is taken out of one machine train, cleaned, and then later used in another train. Other systems track physical assets and tie measurements to them. In order to provide maximum flexibility, this model allows both functional segment entities at a site and physical entities at a site to be placed in the database and data can be related to both as necessary. CRIS Table #44 (ASSET_ON_SEGMENT) stores the utilization of a particular asset on a given segment with the time it was installed and removed. The Segment_Child Table shows the parent-child relationships of segments to each other. For example, segment "Steam Turbine" at site "ABC" is the child of segment "Turbine Generator #1" which is the child of segment "Power Generation Line #1 ". The model allows for more than one segment to be the child of more than one segment. The segment_group_yn field when set to "Y" means that this segment is really a segment composed of 2 or more segments of the same type. If a count of total segments is made from the database, these group segments should be ignored. NOTE: Segment_id is used like a barcode--to assign a unique, non-changeable identifier since a primary key cannot change and must uniquely define the entity. The user_tag_ident field is the identifier which is meaningful to

the plant. Computer systems monitoring or recording information on the same segment should utilize the same segment_site, segment_id pair. User_tag_ident is the user identification tag which follows the nomenclature of the plant. This is normally an abbreviation or user-defined alpha-numeric code from which the plant derives meaning. This column is mandatory. The "name" column is an optional column which is a full description of the segment.

Segment Event Associated with Segment Health - Defines linkage between the health assessment and actual events which corroborate the assessment.

Segment/Asset Event - The definition of an actual logged event associated with a segment or asset. General classes of events include: changes in operational state, failure root cause assessments, failure effects, alarms, abnormal conditions, etc. Associated tables maintain the event history.

Segment/Asset Event Cause and Effect - Defines cause and effect linkages between events in a causal network. May be used to define linkages between actual, proposed, or hypothetical events. Cause and effect linkages for proposed and hypothetical events have an associated probability.

Segment/Asset Event to Function Link - Links actual events to the functions that were effected, and maintains the historical record

Segment/Asset Function - Defines the function(s) which are associated with a segment.

Segment/Asset Health - An assessment of health that can be made for past condition, current condition, or future condition. Health assessment has an associated assessment agent, health grade, and likelihood probability.

Segment/Asset Remaining Life - An assessment of the remaining life of the segment assuming that the equipment continues in the present operational environment without intervention. The assessment has an associated assessing agent, a likelihood probability, and an error estimate (+/- X hrs).

Site - MIMOSA term for a business location

Site 0 Database - MIMOSA maintained database containing all pre-defined information types

Utilization - Defines the segment in which an asset is being placed into service, tracks asset service history.

Work Audit - Defines the status of a work request.

Work Management Type - Defines general types of work management work requests and work orders (maintenance and operations)

Work Task Type - Defines specific types of maintenance or operational adjustments to be made.