**3 - CBM File Registration and Global Attributes**

| **Slide #** | **Audio/Narrator** | **Graphics** |
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| 1 | Title page | Standard title page |
| 2 | Welcome to module 3, “CBM File Registration and Global Attributes.”  In this module you will learn:  What a CBM session is?  How are CBM files registered into the LOGSA Common CBM data warehouse?  How are Global Attributes used to model, platform and mission metadata in an ABCD file?  What is the minimum set of metadata that must be written into the ABCD file?  And finally what CDF versions are currently supported for ABCD file? | Standard introduction page |
| 3 | What is a CBM session?  A CBM session is defined as the period from when the platform is powered up and begins collecting data until the platform shutdown process begins and the last data record is recorded.  A single CBM session can last for a few minutes to months. A tank or helicopter only operates for a few hours at a time, but a command shelter or generator may operate continuous for days or weeks.  So the number of CBM files for a CBM session to directly related to the platform being sensored. |  |
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| 4 | How are CBM files registered into the LOGSA Common CBM data warehouse?  The first step in the registration process is based upon the filename. The filename needs to identify the system model, the platform id, and the mission start data and time. This is sufficient information to uniformly tag the CBM file and register it in the warehouse. Addition information on the CBM file naming can be found in the LOGSA CBM File and Message Naming Guidelines on the AKO. That it, your CBM file or message can be registered in the LOGSA Common CBM Data Warehouse. | CAIMAN\_GMB400054-JIT\_2008-02-12T10:24:00\_xx\_yy\_zz.cdf  | - > Mission Start:  | > SN:  > Model:  URL: https://www.us.army.mil/suite/doc/29996730 |
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| 5 | How are Global Attributes used to capture model, platform and mission metadata in an ABCD file? | Need to show a ‘proper’ ABCD file header. |
| 6 | The ABCD file levels. (LVL##) are an organization element that has been added to organize the metadata and provided a richer standardized in the CDF file. Global CDF attributes are used to capture LVL00 (Level Zero) and LVL01 (Level One) metadata tags and their values that apply to the entire ABCD file.  LVL00 attributes identify the system, specific platform, and the date collection start time.  LVL01 attributes identify the sensor locations.  Additional levels have been defined for different purposes:   * ***A*** * ***B*** * ***C*** * LVL90 and higher are for CBM data that the producers want to include that has not already been defined.   All of the required metadata is described in the “Interface Requirement Specifications for ABCD Files” maintained by DISCoE. | CAIMAN\_GMB400054-JIT\_2008-02-12T10:24:00\_xx\_yy\_zz.cdf |
| 7 | This diagram shows how a system model by individual platforms that can be broken down into various functional groups or components (segments.) The segment breakdowns represent the physical structure of the particular system/platform for which an CBM data can be captured.  ***MIMOSA, Open Standards, Seg-Asset-Site*** |  |
| 8 | In this diagram, functional groups or components (segments) have measurement locations associated with them. A measurement location will produce some sort of parametric data that will be stored in the zVariables. A measurement location may represent raw sensor data, other processed data, states, assessments or advisories that are to be written into a CBM file or message. |  |
| 9 | When we look at the ABCD file that represents the data coming from this platform, we can see that it has its Global attributes to store the metadata for this file, at the mission level. | rewrite |
| 10 | From the breakdown (in this slide), you can see there is a segment which represents the system in its entirety. |  |
| 11 | This segment is the (segment that) one which defines the platform itself. In addition to defining the ABCD file model, and the segment representing the site, file level data also records the data acquisition start time. ***This set of data, uniquely identifies the measurement event contained within the data file.*** | LVL00:  MODEL: ABCD file format version  SEGMENT: System model and platform id  MEASUREMENT LOCATION: Functional group or component  EVENT START: Date and time of first observation |
| 12 | At the global level, a “Measurement Location Id” is represents (representing) the entire vehicle (or site.) At Level One, there is a required item of metadata which identifies the platform. There is also a set of data that identifies the type of data stored in the ABCD file. |  |
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| 13 | What is the minimum set of metadata that must be written into the ABCD file?  The absolute minimum amount of global level for the Common CBM Data Warehouse is:   * System Model * Platform Id * Data collection start time   This will allow for the validation of the filename used to register the CBM file in the warehouse.  The ABCD file guidelines supplement the warehouse requirements at the global level with:   * ABCD file version * MIMOSA platform identification * MIMOSA file type * MIMOSA measurement location * MIMOSA OSA-CBM data type |  |
| 14 | LOGSA assumes that it has the capability to read the CBM file that has been transmitted.  ***Validation:***   * The metadata is validated to against the CLOE Repository is insuring all the tags are registered. * The next metadata is used to confirm that the CBM file contents match the metadata encoded in the CBM filename to register the file. * Metadata that can’t be validated will be flagged and reported to LOGSA for review and resolution with the file producer’s CBM project management office. |  |
| 15 | ***Cataloging:***  Again assuming that LOGSA can read the CBM file with a cataloger, information that can be collected from the CBM file includes, but is not limited to:   * How long was the platform used * How far the platform traveled and at what speeds * How many and what type of observations were made * How many warnings and faults were calculated * What the ‘Estimated Time to Failure’ is   ***Where do the metadata tags come from?***  Common metadata tags for LVL00 and LVL01 come from LOGSA. Vendor specific metadata tags can be used, if MIMOSA tags don’t exist. | logsa.ccbmdw@conus.army.mil |
| 16 | CDF allows these attributes to be written as name/value pairs. An attribute has a name specified as a character string. Examples of this are shown. These identify which tables in MIMOSA database the metadata comes from.  Most MIMOSA metadata tags start with a 16 character hexBinary (0-9, A-F) filed followed by two unsigned 4-byte integers (0-4,294,967,295).  ***An attribute has a data type. The value is the information required for that metadata item.***  ***Functional groups*** | LVL00.FILE.Model.model\_id   000003F900000000.1.2  LVL00.PLAT.Segment.segment\_site   000004270101000A.0 |
| 17 | The three elements of the metadata tag are used to retrieve the descriptive information about the tag. When we view this representation of the global attributes stored within an ABCD file, we can see how the metadata tags are used to describe CBM data. |  |
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| 18 | What CDF versions are currently supported for ABCD file versions?  The LOGSA Common CBM Data Warehouse is using CDF version 3.3 which is backwards compatible. LOGSA recommends that CBM file producers use version 3.3.  The ABCD guidelines are version 1.0 which defines the collection of metadata to be included in ABCD files. |  |
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| 19 | You have concluded the module “CBM File Registration and Global Attributes.”  In this lesson you should learned:  What a CBM session is?  How are CBM files registered into the LOGSA Common CBM data warehouse?  How are Global Attributes used to capture model, platform and mission metadata in an ABCD file?  What is the minimum set of metadata that must be written into the ABCD file?  And finally what CDF versions are currently supported for ABCD file?  You may either review parts of the information, or move on to the next module.  Click next to continue. | Standard closing page with contacts and comments information. |