CORENA

CORENA eMMP

PRODUCT HIGHLIGHT

A complete solution for managing all maintenance program data

- Increase mechanic efficiency
- Increase maintenance throughput
- Provide more accurate record keeping
- Reduce the overall cost of maintenance

Our solution has been proved to do all that, and in addition, it allows planners to track specific requirements and tasks to individual customers, equipment configuration, or serialized equipment numbers which is essential for today's dynamic maintenance environments.

LOWER TOTAL COST OF OWNERSHIP FOR OEMs

OEM's use the CORENA solution to better communicate maintenance requirements and specifications to their customers, to provide a collaborative authoring environment to engineering and suppliers, and to provide a foundation for a lower Total Cost of Ownership (TCO) of their products.

MORE EFFICIENT MAINTENANCE PLANNING

MRO service centers use the solution to further detail specificiations, manage tasks lists per customer and equipment, capture and document business critical maintenance items, produce work orders, report on work accomplished, capture shop feedback, and provide the tools to drive more efficient maintenance plans and work execution.

CORENA develops document management and system integration software for the defense, aerospace, automotive, energy, and maritime industries.

CORENA's Commercial-Off-The-Shelf products are highly configurable and allows for the solution to be aligned with your business processes. We offer solutions that handle the entire lifecycle including data input, management, publishing and delivery.

Visit us at www.corena.com

LISTEN TO OUR CUSTOMERS

The Program Manager for fleet data and maintenance systems integration at IAE, says:

"IAE is pleased to have found a vendor with extensive knowledge within the aerospace industry to help us implement the next generation eMMP, which we believe gives IAE the leadership position in relation to other engine maintenance program solutions currently on the market. Allowing our customers to remotely access and further customize their MMPs will present an opportunity for further maintenance cost reduction and overall process improvement."

International Aero Engines

KEY CABABILITIES

- **Maintenance Requirements/Specifications**

Static maintenance requirements are viewed in a web based tool that maintenance centers and equipment owners can use in real time to view and customize the maintenance items and build maintenance level task lists. Workscopes or workpackages can be seamlessly derived for entire fleets, specific component or engine serial numbers based on their customized information.

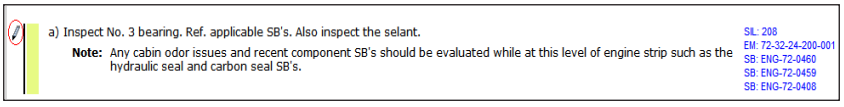
Coupled with CORENA's Integrated Electronic Maintenance Publications (IETP), specific tasks are directly linked to the detail equipment inspection and repair procedures. This capability enables maintenance personnel to plan and execute maintenance tasks more efficiently and accurately. In addition, the application facilitates a feedback process for reporting of findings during a shop visit which is the basis for continuous process improvement and maintenance cost reduction.

The solution can be deployed either on the web or as a standalone application.

- **Authoring of Master Manuals**

The true collaborative authoring environment allows privileged users to maintain a 'master' version of the maintenance specification. Customized versions are created based on this "master " version. Maintenance items may be authored simultaneously by any number of users across organizations and companies. Authoring is done using a standard browser interface which allows the user to include graphics, movies, shared data tables create standard hyperlinks to web sites and to create hyperlinks pointing to IETP specific data.

When the manual is displayed, simply click on the pen icon to author a paragraph:



This will bring up the assisted authoring window shown on the next page:

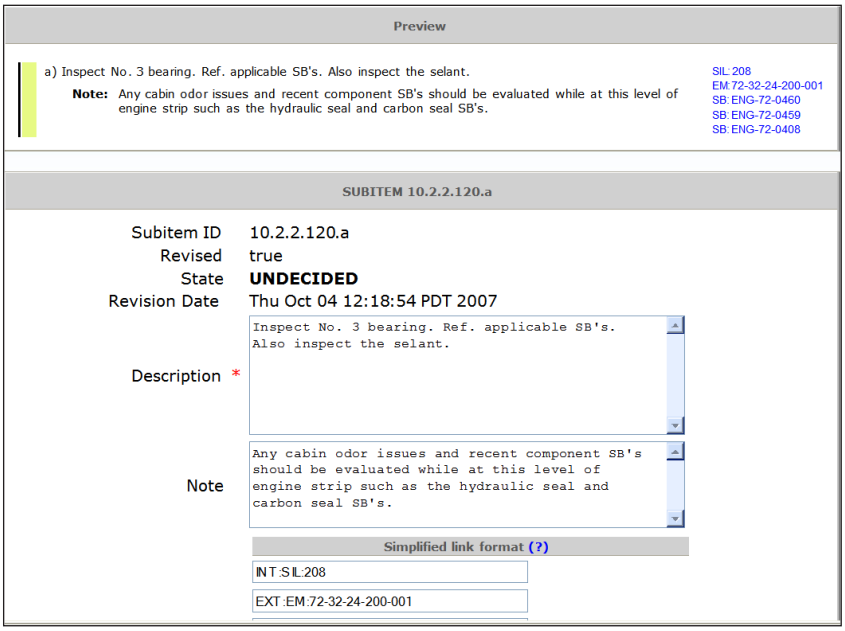
TECHNICAL REQUIREMENTS

PLATFORMS
Windows Server 2003, Linux Enterprise, UNIX

DATABASE
Oracle

WEB SERVER
JBOSS 4.0.5 or later, WebSphere 6.1 or later

CLIENT BROWSER
Microsoft Internet Explorer 6 or later



Maintenance data is internally stored as XML, which allows for advanced filtering, hyperlinking and search capabilities, utilized during the publication process.

The authoring environment automatically tracks all changes which are clearly marked up on a paragraph level by revision bars. Authors may also preview the current contents which isdisplayed exactly as the end user will see it when it is released for production. The author has the ability to apply a recent change to other maintenance requirement documents.

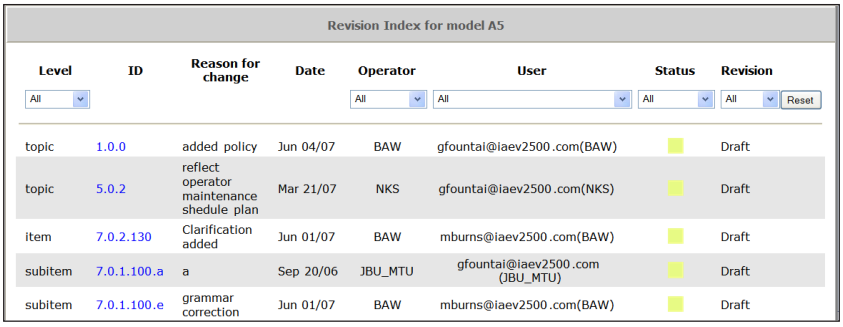
Applying the latest of the industry standards available such as IBM WebSphere, Java, Web Services, XML and XSLT, CORENA has provided its customer base with a future proof, state of the art solution for managing and publishing maintenance requirements and related electronic manuals.

Customized Authoring

Operators and shops have the ability to customize contents, based on the generic maintenance requirements. Any part of the document may be modified to fit specific requirements, and the downstream publication process fully support creation of customer specific specifications and workscopes

Publishing

The Publication Manager can see the full set of changes made between two revisions in the Revision Index window:



Revision Index for model A5

Level	ID	Reason for change	Date	Operator	User	Status	Revision
All				All	All	All	All Reset
topic	1.0.0	added policy	Jun 04/07	BAW	gfountai@iaev2500.com(BAW)		Draft
topic	5.0.2	reflect operator maintenance shedule plan	Mar 21/07	NKS	gfountai@iaev2500.com(NKS)		Draft
item	7.0.2.130	Clarification added	Jun 01/07	BAW	mburns@iaev2500.com(BAW)		Draft
subitem	7.0.1.100.a	a	Sep 20/06	JBU_MTU	gfountai@iaev2500.com (JBU_MTU)		Draft
subitem	7.0.1.100.e	grammar correction	Jun 01/07	BAW	mburns@iaev2500.com(BAW)		Draft

Each separate maintenance item revision has its own workflow state (draft, official, concur and defer) as well as detailed information about 'who did what when and why'.

Once the maintenance specification is ready to be released for production, the Publication Manager selects which output images should be created by selecting from a list of customers. Revision bars, highlights, transmittal letters (listing changes between the latest two revisions), and table of contents are automatically included in the output contents.

Distribution

Production ready images are built and copied to customer specific distribution folders where operators & shops may download the latest generic or customized image contents. This capability allows them to immediately start working on the most recent version, and at the same time it dramatically reduces the CD-ROM replication and shipping costs for the OEM.

Workscopes

The business intelligence behind the workscope creation is based on live feeds from various databases. When the equipment is due for a shop visit, a customized workscope is created, based on the equipment serial number, equipment counters, and the set of active maintenance items. The workscope contains equipment data, a list of already incorporated and suggested service bulletins and extracted maintenance items which may be further customized to fit the level of maintenance required for the event.

Workscopes can take the following states:

Draft: planning phase – the OEM, operator, shop/service center and authorities review workscopes to decide on the level of maintenance to be performed. They use a 'chat room' feature for commenting on the maintenance requirements.
Issued: official workscope – the shop executes the recommendations in the workscope, followe hyperlinks to IETM data, enter findings in the on-line workscope tool.
Final: shop visit complete – authorities have added their electronic signatures and the workscope is archived.

CORENA USA Inc.
40 Lake Bellevue Drive
Suite 230
Bellevue, WA 98005
USA
Tel: +1 425 643 7443

CORENA Canada Ltd.
247 North Service Rd. West
Oakville
Ontario L6M 3E6
Canada
Tel: +1 905 844 9595

CORENA Danmark A/S
Bregnerødvej 139
DK-3460 Birkerød
Denmark
Tel: + 45 4594 9400

CORENA Norge AS
Industritunet
Dyrmyrgt.35
N-3611 Kongsberg
Norway
Tel: + 47 3271 7200

CORENA Sverige AB
Åbyvägen 3
702 27 Örebro
Sverige
Tel: + 46 70253 7340

CORENA Deutschland GmbH
Hahnstrasse 70
D-60538 Frankfurt Am Main
Germany
Tel:+49 696 69 00 80

CORENA Holding A/S
Beijing Representative Office
Room 5128, 1 Sanlihe Road
Haidian District
Beijing 100044
China
Tel: +86 10 6831 3388 (5128)

HL-05-eMMP V.01 Corporate Marketing, CORENA A/S