International co-operation to demonstrate interoperability of schedules

This project is relevant for everyone doing planning
The ILAP standard is relevant for everyone who do planning

The standard is based on the common planning theory, we all share

The standard is suitable for every scheduling tool we all use

We have a structure in the standard where every industry can add their terms
What is the schedule data challenge?

Scheduling tools use different terms about the same object. An example is **people needed to execute a task**. This is named differently in scheduling tools:

<table>
<thead>
<tr>
<th>Resource</th>
<th>Discipline can be either «Activity code» or as a part of the «WBS structure»</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project 2013</td>
<td>Workcenter</td>
</tr>
<tr>
<td>Microsoft</td>
<td></td>
</tr>
<tr>
<td>ORACLE PRIMAVERA</td>
<td></td>
</tr>
<tr>
<td>SAP</td>
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This makes integration of schedules complicated and troublesome.
The solution

Discipline: that is according to the knowledge required to carry out the work
OGI planning pilot foundation

1. International standard (ISO15926/13) for schedule data terms is completed

2. Adapters for SAP and Safran Project are developed. Implementation started in Statoil. Primavera adapter under development

3. The project and standard is known and get more and more support
Standards-based Interoperability

Goal - We ensure that schedules can be seamlessly transferred between all relevant scheduling systems and related systems that need schedule data.

We have:
- Simplified
- Standardized
- Digitalized
- Interoperate
Full Asset Life-cycle Management
Physical and Digital Asset are included in OIIIE

Completion & Commission

Continuous Improvement Feedback Loops

Product Design | Asset MFG

Design Engineer | Procure | Construct

Operate & Maintain (O&M)

Device/Equip Manufacturing

Platform Integrator Capital Project

Owner/Operators

Planning the whole Asset Lifecycle
OIIE Simplified Systems Connectivity and Services Architecture

Enterprise Business Systems

- Planning
- Engineering Design
- Construction Management
- Operations Management
- Operations Risk Management
- Maintenance Management

OpenO&M Information Service Bus Model (ISBM)

- Automation Control Bus
- Automation and Control
- HSE and Operation Monitoring
- Prognostic & Health Management

Connected Device

- IIoT and Industrie4.0 Event-driven solutions architecture for Asset Management
- IIoT Connections
  - OPC UA (AMQP, MQTT, DDS)
- ISBM Web Services
- Field Networks
- SPARQL

Industry Reference Data Libraries
  - (PCA, USPI, IEC, ISO…)
- IIoT Device Metadata

Enterprise Reference Data Libraries
- IIoT/Industrie4.0 Device Metadata

DMZ

Sensor/Transducer
OIIE OGI planning pilot participants

- ConocoPhillips (USA)
- bp
- ConocoPhillips (Norway)
- Eni
- Statoil
- MIMOSA
- AkerBP
- PCA
- IAPG

Chevron
We pay at least double – for less quality!

High value use cases

1. Contractor establish schedule

2. SAP is automatically updated
How to achieve project control?

High value use cases
High value use cases

1. Reduce the cost for transfer and integration of schedules
2. Improve quality of schedule data
3. Improve quality of the schedule
4. Improve business decisions
5. Improve risk decisions

Corporate net present value is >100 million USD for a O&O implementing ILAP
We will demonstrate automated interoperability using the MIMOSA OIIE interoperability standards

Proved by using the MIMOSA OGI pilot test bed

International co-operation to demonstrate interoperability
How we are organized

Project Manager
Robert Skaar
Statoil

Lead: Robert
Planning
Expert Group

Lead: Ken Dunn
IT
Expert Group

Connecting planning and IT
Ken & Robert
The following schedule to be developed

Owner&Operator schedules:
Level 1 schedule – 1 page high level of the whole project
Level 2 schedule – 1 page of contracts in the project

Contractor schedule:
Level 3 schedule – 1 page of contractors schedule in the project
Level 4 schedule – contractor EPCIC network schedules
Level 5 schedule – contractor EPCIC work schedules
Story P001: We need a debutanizer system

1. We need to build a debutanizer system to achieve our project goal.

2. Then I suggest you develop the scope and schedules for this to the steering committee.
You can make a difference

The ILAP project and the OIIE OGI pilot are by the industry for the industry

Our contribution makes a difference

We invite everyone to participate in the OIIE OGI pilot

If you are interested please contact Ken or Allan for more information
Thank you for your time and attention
Backup slides:
How is this done in the API

Contractor

Software mapping of terms in API

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<th>ILAP term</th>
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This is done by a planner

Operator

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