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OCX

The Open Class 3D Exchange Consortium

3rd Full Member Meeting

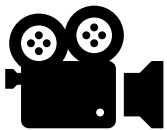IF Task Group

07 June 2022

Welcome

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Live meeting rules

- Mute your microphones during the presentations

- Raise your hand for questions/comments:

- The moderator will announce you

- Remember to unmute when you are announced ☺

- The meeting will be recorded

3Docx Consortium Meeting, June 6, 2022

Agenda

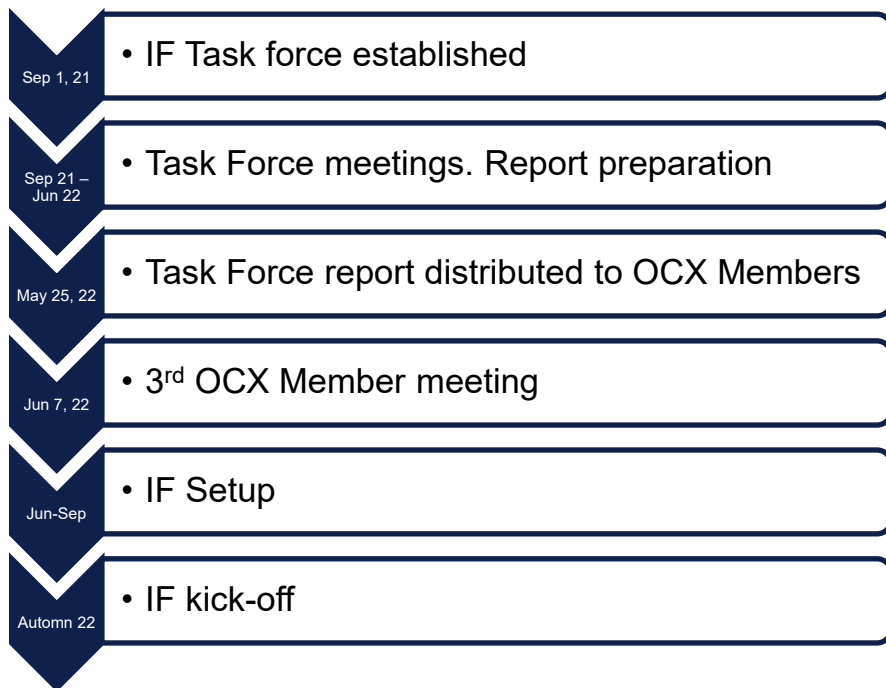| TIME	TOPIC	RESPONSIBLE
13:00	Welcome and introduction. Meeting rules	DNV
13:10	Update on OCX activities since last meeting including status on the Consortium website	DNV
13:30	Implementor Forum Proposal. Report from the Task Group	Task Group
14:00	Feedback from participants. Discuss and agree on the next steps	All
14:45	Summary and next steps	All
15:00	Adjourn	

Meeting objectives

- Present the proposed set up of the Implementer Forum

- Discuss and agree on the next steps

Status update

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Status on ongoing initiatives

Implementer Forum (IF)

Sep 1, 21	• IF Task force established
Sep 21 – Jun 22	• Task Force meetings. Report preparation
May 25, 22	• Task Force report distributed to OCX Members
Jun 7, 22	• 3rd OCX Member meeting
Jun-Sep	• IF Setup
Automn 22	• IF kick-off

OCX Implementor Forum established

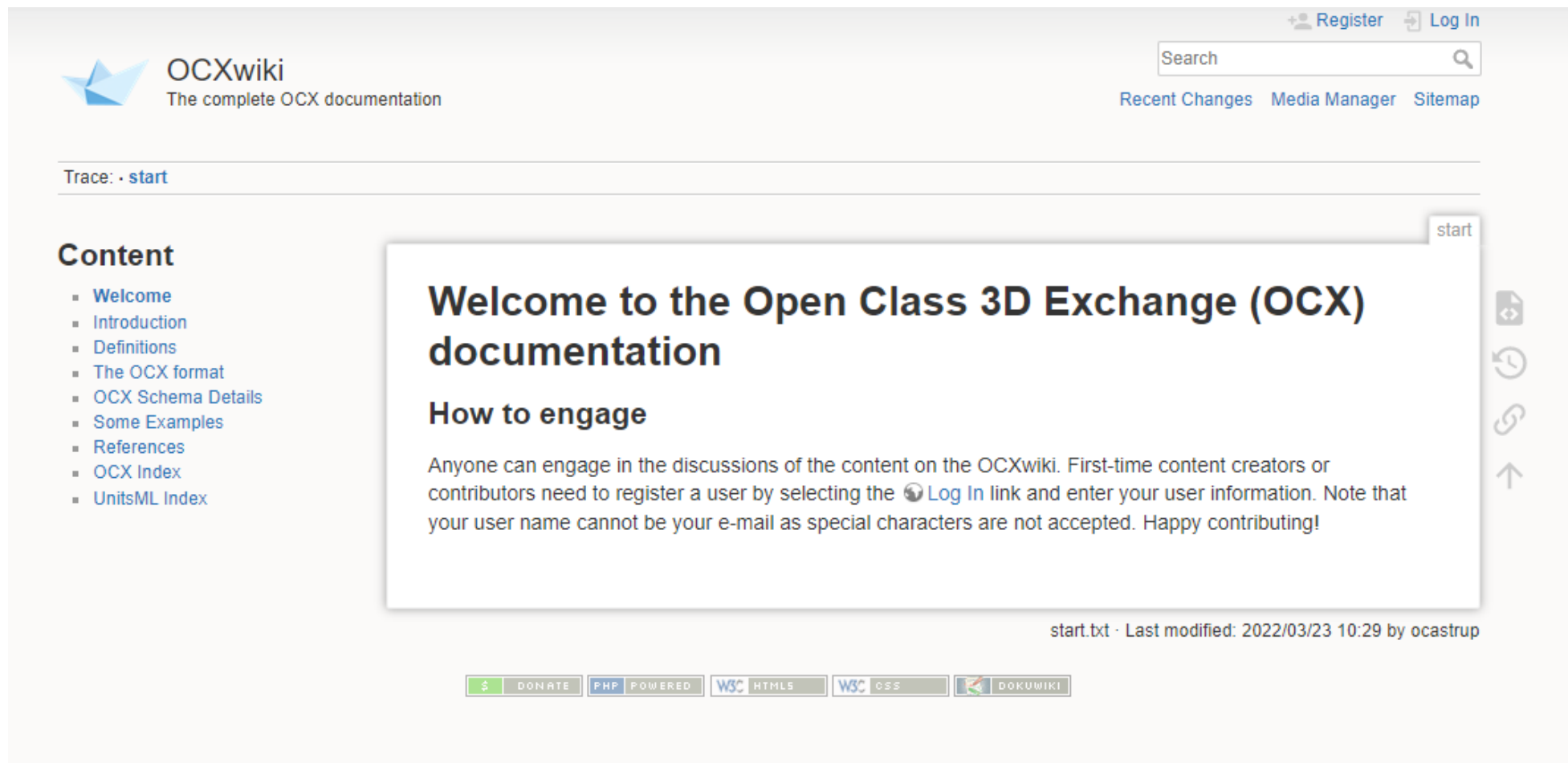## OCX collaboration site and new members

- Sep 2021: http://3docx.org/ goes live

- Jan- Apr 2022:
    - Experimental Wiki site added
    - OCX working draft available on GitHub

- May 2022: Deltamarin joins the Consortium

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Our web site 3Docx.org
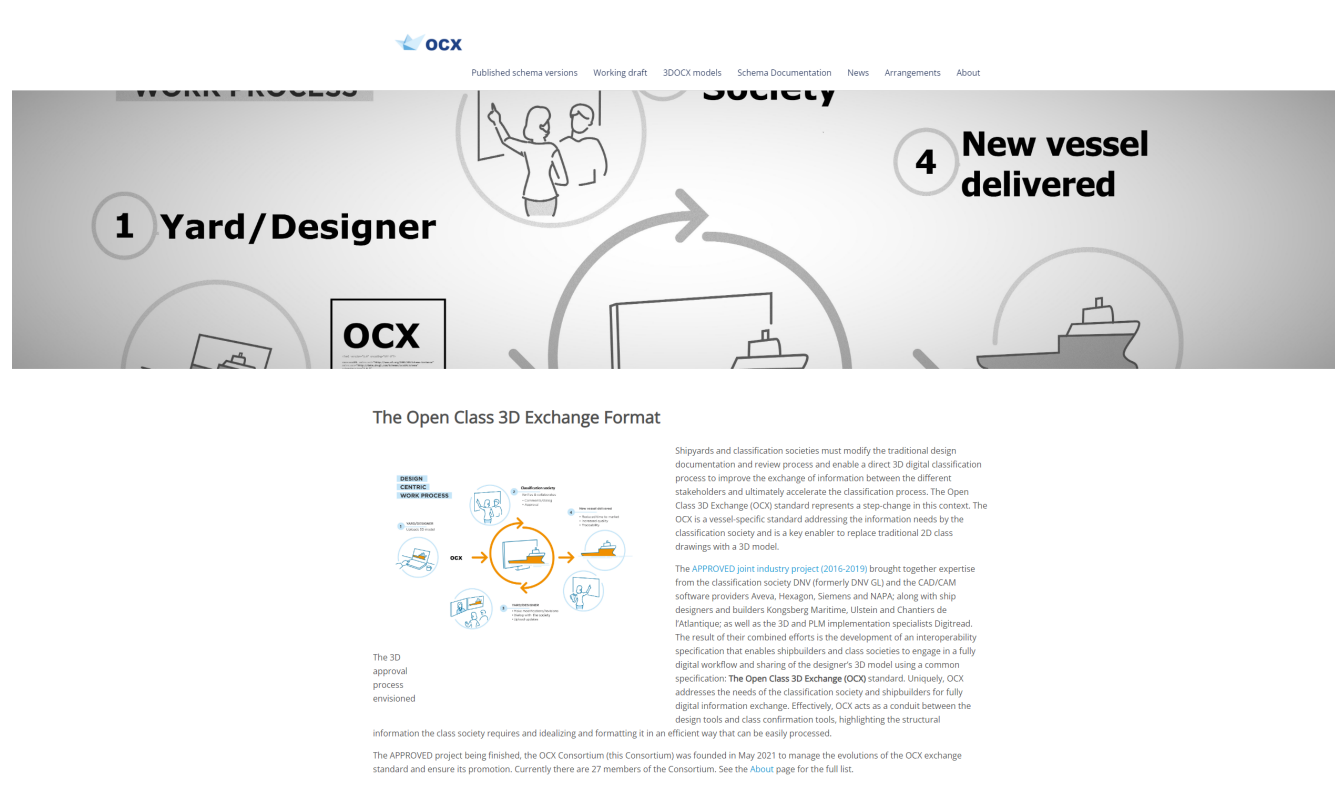
- Find information about ongoing activities

- Download the published schema version and test models

- Access the OCX Wiki documentation (Work in progress)

- The working draft of the OCX schema is on GitHub

- Contribute to the next schema update on GitHub

OCX Wiki (work in progress)

The OCX schema resides on GitHub

- 3Docx.org has been registered as an Organisation on GitHub

- The working draft version of the schema is stored and tracked on GitHub.

- Schema changes can be proposed by posting an Issue

- OCX Members can contribute (require registering the GitHub user as a member of the 3Docx.org organisation)

Task Group Report

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Implementer Forum Task Group

The Task Group (TG) is formed by the following six members:

1. **DNV** - Group lead (Ole Chr. Astrup

2. **BV** (Hugues Moreau)

3. **Chantiers de l'Atlantique** (Toni Bars)

4. **PROSTEP** (Mathias Grau)

5. **SSI/NDAR** (Nick Danese)

6. **NAPA** (Mikko Forss)

Task Group mandate

- **Prepare the decision basis setting up and running the OCX Implementer Forum**

It was agreed at the meeting on September 1, 2021, to evaluate two alternatives for organising an Implementer Forum (IF):

1. The IF is controlled by the OCX Consortium utilising only its resources

2. The IF is controlled by the OCX consortium utilising its resources if available and hiring missing expertise

Task Group recommendation

The Task Group recommends the OCX Consortium to chose **the second alternative**

IF controlled by the Consortium and hiring in the facilitating expertise

PROS	CONS
Outsourcing the IF facilitation guarantees that we have the right expertise	Will invoke outsourcing costs and an IF fee.
Outsourcing facilitation can provide a more neutral outcome and overcome the potential conflict of interest	It still requires overseeing by IF participants
Outsourcing the IF infrastructure is an option	
Shorter time to get the IF up and running	

The Task Group proposes to implement the same decision model as for the Consortium; 2/3 voting majority for decisions.

Major arguments against alternative 1

- The facilitator effort is large, and it is unreasonable to believe an IF participant will take this role without monetary compensation

- Leading and facilitating the IF require experience, which we might not find with any of the OCX members

- Leading the IF by one OCX member may bias the tasks and hence potentially lead to a conflict of interest

- It may take a longer time to ramp up as the IF facilitator has not done this before

The Task Group argue that the cost for an IF participant will be the same for both alternatives: It is the same jobs to be done.

The organisation of the Implementer Forum

A three-party relationship:

1. The Implementer/ Interoperability Forum
   - A user group representing end-users
   - An implementor group representing SW vendors/societies implementing OCX support

2. Standards Community ≡ The OCX Consortium

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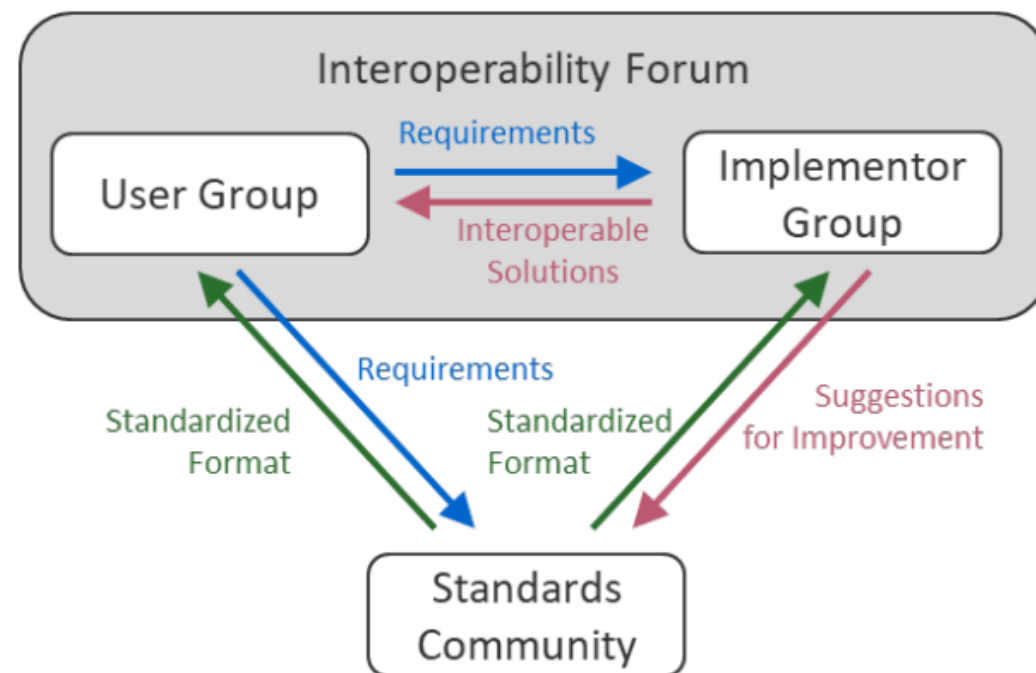
Benefits

- Testing in a closed, trusted environment

- Early detection of errors leads to faster development cycles

- Beta-testing with other systems enhances product interoperability and robustness even before production release

- User requirements can be communicated, and common implementation approaches agreed.

- Stability of new capabilities

- Early feedback on requirements on the feasibility and the timeframe for support in various tools

> Only IF *participants* receive the benefits and will have to pay a fee to cover running costs

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The Implementer Forum Tasks

Task	Description	Role
Project Management and facilitation (PM)	Leading all IF tasks. Reporting to OCX Consortium Full Member group	Facilitator
PR (publish results)	Publishing of test results for each use case and each export/import case	Facilitator
Test Facilitation	Facilitation of test rounds between all IF participants	Facilitator
Test Documentation	Documentation of each Test round. Identification of test metrics and reporting	Facilitator
Implementation Guidelines	Guidelines on how to implement different aspects of the schema to ensure consistent interpretation and results across all SW tools.	Subject matter expert
Test Model Documentation	Documentation of the test model in a way to make it reproducible by any CAD system	Subject matter expert
Test Model Creation	The effort necessary to natively create each 3D model in the different vendor CAD systems	Subject matter expert

Cost groups

The costs for setting up and running an Implementer Forum can be divided into four groups:

- 1. Ramp-up costs: This is a one-time cost for setting up and establishing the IF. This includes the work to write the implementation guideline document and agree on format specifications and test process.

- 2. Per year fixed costs: This includes the project management and facilitation of the IF activities involving writing the test documentation, test model documentation and test model creation. organising the test rounds, collecting the results, analysing the results, writing up the test report, and publishing work. If there are schema changes, the implementation guidelines must be updated.

- 3. Per annum variable costs: The variable costs depend on the use cases and the test scope, i.e., the number of test models covering the use cases, number of test participants (export and import) and number of test rounds.

- 4. Infrastructure costs: Infrastructure platform for hosting working documents (test documentation, guidelines, test data, results, minutes…), tools for test evaluation (can be Excel) and tools for checking test files for syntax, structure, and contents (i.e., quality).

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Sizing of the Implementer Forum activities

- A fully operational Implementer Forum may consist of 12-15 participants and have an approximate activity level as described in the table to the right.

- Between 40-50% of the effort required to operate the IF will be associated with the facilitation tasks:
  - Project Management and facilitation, organizing the test rounds, documenting the test results and publishing of test results.

- Based on the experience from PROSTEP IVIP, the cost of operating an IF of this size will be approximately **50 k€ per year**.

| Description	#	Comment
Implementor Group	10	5 CAD vendors, 5 classification societies
User Group	3-5	From any OCX Member (designer/yard, vendor, society etc.)
Number of test rounds per year	2	All use cases with model export and import are tested each test round
Number of Use Cases	2-3	Number of uses cases when IF is fully implemented
Number of CAD models to maintain	2	One CAD model may support several use cases
Number of exports and imports tested per year	80	5 CAD x 2 models x 2 use cases x 2 rounds = 40

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Implementer Forum Costs

1. The cost for running a fully operational IF is assumed to be **50 k€ per year**.

2. 40-50% of this cost is incompressible and must be provided in cash for hiring in the facilitation

3. A recommended minimum number of IF participants is 10

4. The cost per participant will then be 50 k€/10 = 5 k€ per annum

5. A participant with the capacity for in-kind work may provide their 5 k€ payment as two contributions: for example, a split of 2.5 k€ in cash and 2.5 k€ as in-kind.

20 IF participants will reduce the participation fee to 50/20 = 2,5 k€ per annum.

The proposed use case

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Proposed first Use Case and model

Prerequisites:	**OCX model based on current schema capabilities (V2.8.6)**
Use case title:	**Longitudinal Strength**
Use case objective:	**Assess the longitudinal strength of the vessel according to the classification society's rules.**
Model sub-division:	**Cargo hold area, 1 hold**
Ship type:	**VLCC (Very Large Crude Oil Carrier)**
Provider:	**NAPA**
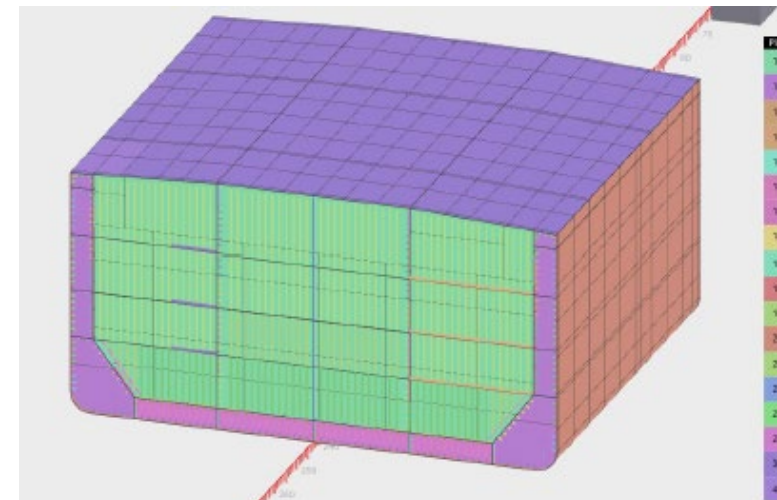
NAPA will provide the following source data for model creation:

- Drawings with dimensions and scantling information
- OCX file of the model (for reference)
- IGES and HTML export of the model (for reference)
- NAPA database (for reference)
- Test model to be used for the "Longitudinal Strength" use case

The next steps

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The next steps for establishing the IF

Assuming that the OCX IF will be run by the OCX consortium, next steps would be:

- Ensuring the funding and identifying budget

- Setting up a project plan for the first year including (at least) the first test round

- Nominating roles and responsibilities incl. sourcing external support if required

- Kick-off meeting for IF project year one

Summary and wrap up

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Next OCX full member meeting

- In person meeting

- Hosted by DNV at Høvik, Oslo

- Tentative dates: Mid-October

- A technical program focusing on exchanging experience working with the OCX schema

- Kick off the Implementer Forum!

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