Open Class 3D Exchange Consortium

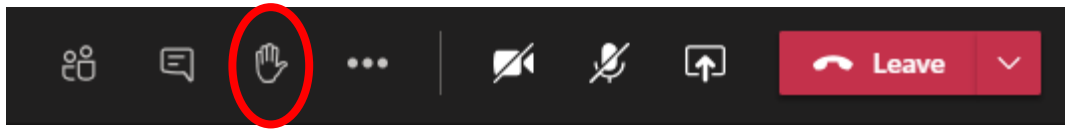
Kick-off meeting

February 03, 2021

Welcome

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

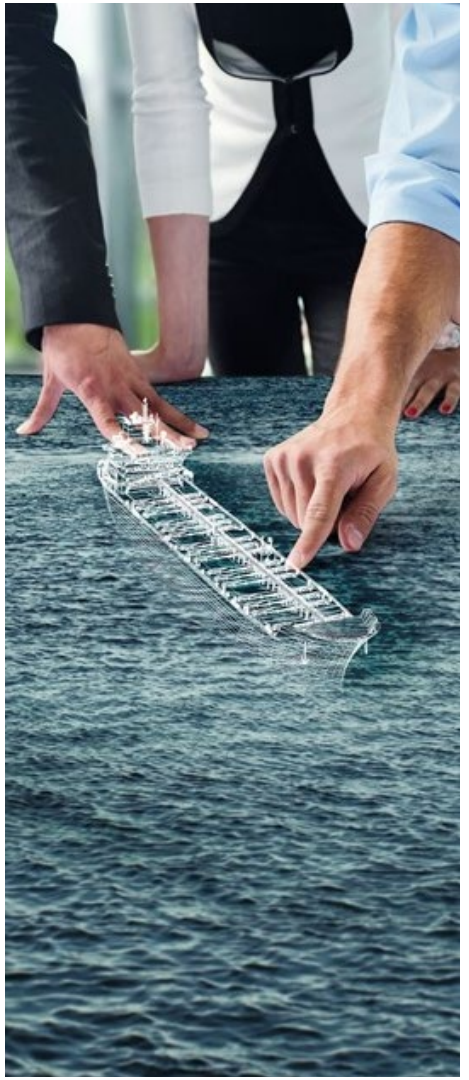
3Docx Consortium Meeting

Agenda

SCHEDULE	TOPIC	RESPONSIBLE
09:00-09:15	Welcome and introduction. Meeting rules	DNV GL
09:15-09:45	3Docx branding, status, organisation, 3Docx models	DNV GL
Industry engagement, neutral 3D viewers:		
09:45-10:00	PROSTEP	PROSTEP
10:00-10:15	KR	KR
10:15-10:30	BV/Aerys	BV/Aerys
10:30-10:45	NAPA	NAPA
10:45-11:00	DNV GL	DNVGL
11:00-11:30	QA	All
11:30-11:45	Consortium Agreement, proposed signing process	DNV GL
11:45-12:00	Way forward, standardisation topics, next meetings	All
12:00	Adjourn	

Meeting objectives

- Kick off the Consortium
- Status on the standard
- Organisation
- Way forward



Status and branding

Branding

- The APPROVED working group has decided to brand the OCX XML format as **3Docx**. OCX models will have the file extension .3Docx to distinguish them from other XML files.
- We have acquired the domain **3Docx.org** as a placeholder for the Consortium to use for all their activities related to the OCX format.
- It is the plan for the Consortium to use this channel to publish new versions of the standard, receive community feedback and ideas and share 3Docx public test models and open access tools.
- The official channel for any stakeholder or interested party to access the officially published OCX release.

3Docx public models

- The APPROVED working group has made available some open 3Docx test models.
- When the 3Docx.org site is in operation, it will be possible to access these test models from the site.
- In an intermediate period, the models will be made available from the SharePoint: "OCX - Open Class 3D Exchange standard"

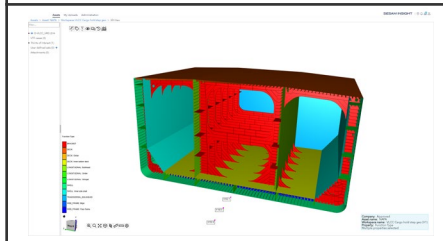
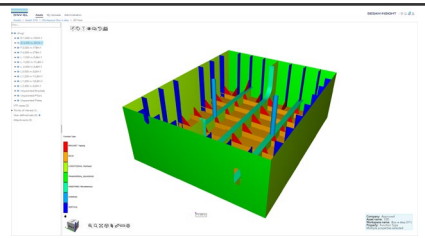
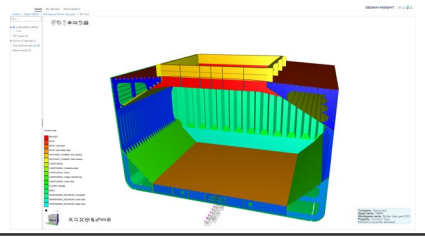
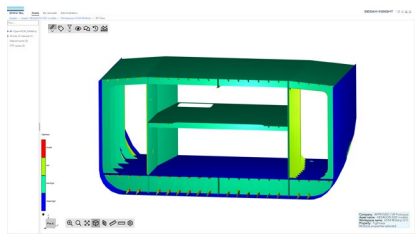
Available 3Docx test models

Test model description (document)

3D OCX test models

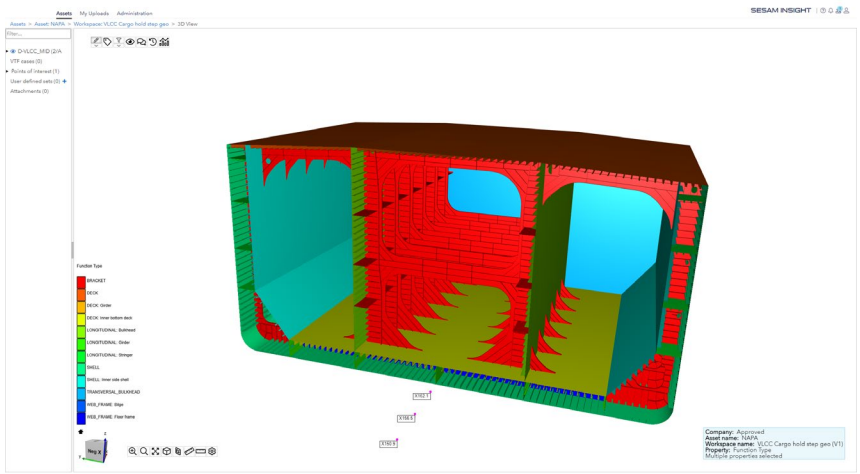
Contents

Four models are available:

NAPA	S3D
VLCC, mid cargo hold	Open HCM Box
	
Bulk, mid cargo hold	Open HCM mid-ship
	

Model documentation

VLCC Model:

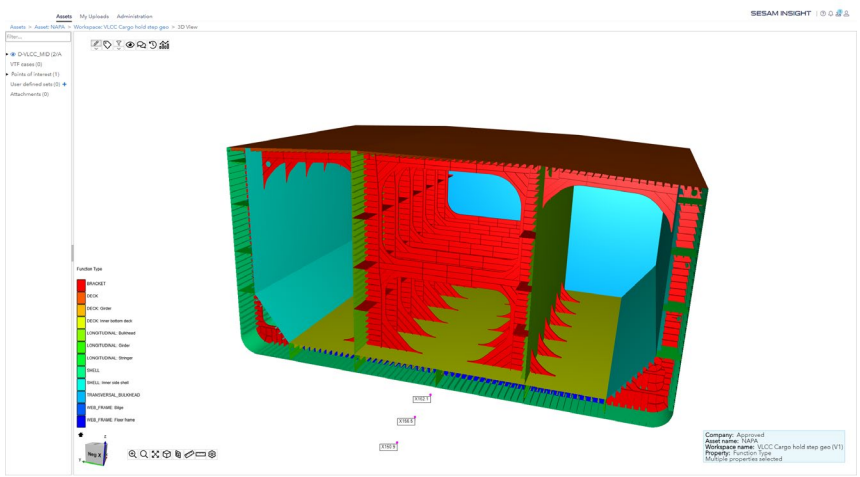


Model summary:

```
3DOcx Vessel data:
-----------------------------------------------------
  Number of Vessel items                    :      1
  Number of ClassificationData items        :      1
  Number of PrincipalParticulars items      :      1
  Number of BuilderInformation items        :      1
  Number of ClassNotation items             :      0
  Number of TonnageData items               :      0
  Number of StatutoryData items             :      0
  Number of ShipDesignation items           :      0

3DOcx Structure data:
-----------------------------------------------------
  Number of Panels                          :    143
  Number of Plates                          :    523
  Number of Stiffeners                      :   4102
  Number of Brackets                        :      0
  Number of Pillars                         :      0
  Number of Seams                           :    230
Number of structure parts                   :   4998

3DOcx connection data:
-----------------------------------------------------
  Number of ConnectionConfiguration items   :    124
  Number of Penetration items               :     60

3DOcx catalogue objects:
-----------------------------------------------------
  Number of Material types                  :      5
  Number of BarSection types                :     38
  Number of Hole2D types                    :     30

3DOcx grid data:
-----------------------------------------------------
  Number of XRefPlanes grids                :      1
  Number of YRefPlanes grids                :      1
  Number of ZRefPlanes grids                :      1

3DOcx unit data:
-----------------------------------------------------
  Number of Unit items                      :     13
  Number of Dimension items                 :      9
=====================================================
```

Each model is contained in a separate download package

VLCC Model



Package files

File	Description
`D-VLCC-MID_2020_2.3Docx`	The exported 3Docx XML file.
`D-VLCC-MID_2020_2.validation.log`	The log file from the validate3Docx.exe validator
`D-VLCC-MID_2020_2.validation.error.log`	The errors reported by the validator.
`D-VLCC-MID_2020_2.xslx`	Dump of 3Docx attributes to an Excel spread-sheet.
`Directory: Auxilliary_files`	Sub folder containing the external geometry files for all 3Docx parts

3Docx toolkit

The **validate3Docx.exe** app

- A windows executable console application that can validate a 3Docx file against a valid OCX schema version.
- The application accepts command line options
- Validation scopes:
  - Lazy (validate one instance of every object)
  - All (validate every instance)
  - Specific (Validate all instances of a specified object)

```
C:\Users\oca\OneDrive - DNV GL\Git_Repos\TestModels\SharePoint>validate3Docx.exe --help
Usage: validate3Docx.exe [OPTIONS]

  Validate a 3Docx xml model

Options:
  -m, --model PATH
  -sv, --skip_validation          Use this flag to skip any model validation.
  -v, --validate [Lazy|Strict|Specific]
                                  The object instances in the 3Docx file to be
                                  validated:Lazy: Validate one instance of
                                  every object. This is a quick validation and
                                  most schema errors are captured. Strict:
                                  Every instance of an object is validated.
                                  (Time-consuming for large models) Specific:
                                  Named objects. All instances of the named
                                  object will be validated.The objects to
                                  validate are specified using the option
                                  --object.

  -o, --object TEXT               The object to be validated on the form
                                  "name". Repeat the option for multiple
                                  objects

  -ve, --validate_enumerations    Use this flag to validate whether
                                  enumerations are according to the schema
                                  values.

  -ps, --print_source             Use this flag to output the xml source of a
                                  non-valid element to the error log

  -sl, --separate_logfiles        Use this flag to output separate logfiles
                                  for errors and warnings which is convenient
                                  for larege models. The default is to output
                                  one logfile containg all logs

  -s, --schema PATH               The location of the 3docx XSD schema. The
                                  default schema and version are located at
                                  "schema_versions/OCX_Schema_V285.XSD"

  -r, --reason_for_change         This flag will print the validate3Docx
                                  version history and reasons for change.

  -sc, --schema_changes [None|Current|All]
                                  Print the schema changes:None: (Default) no
                                  output of schema changes.Current Outputs the
                                  change history for the current schema
                                  version.All: Output the complete version
                                  history.

  --help                          Show this message and exit.
```

Industry engagement, 3D viewers

PROSTEP

KR

BV/Aerys

NAPA

DNV GL

QA

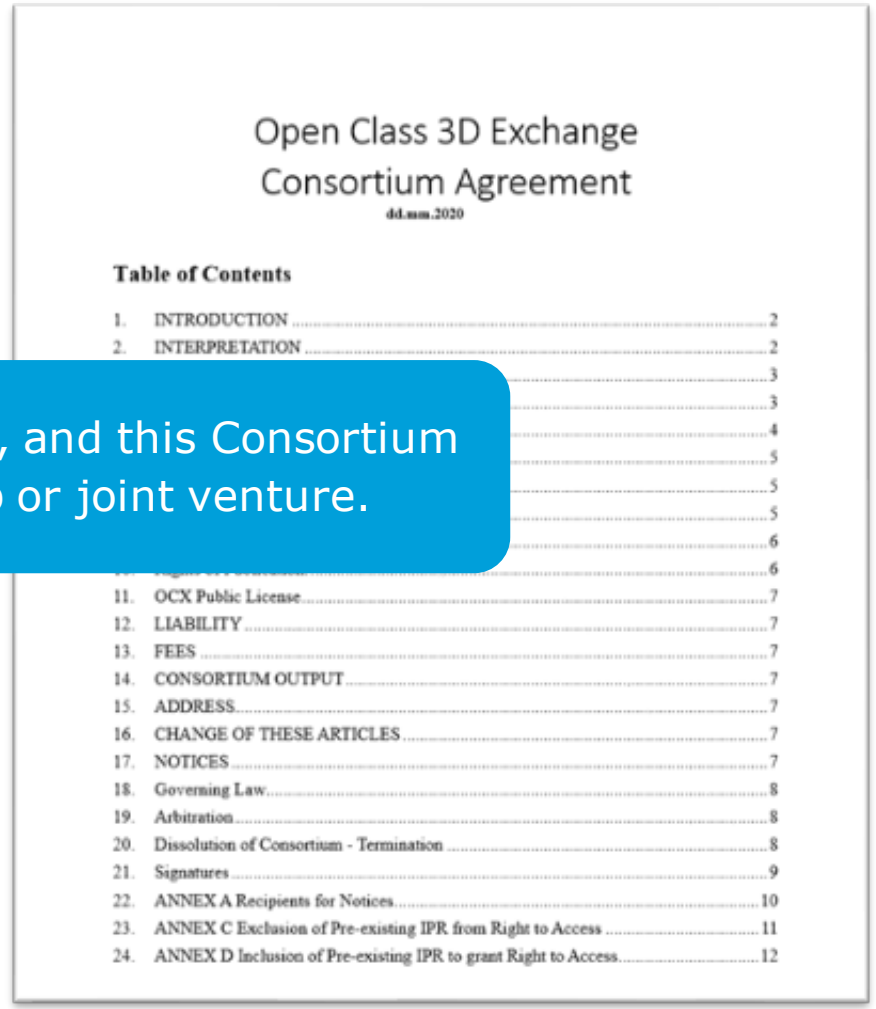
Consortium Agreement, proposed signing process

Purpose of the consortium

- Increase maritime safety through transparent design documentation and processing of data
- Support the evolutions of the OCX standard and promote its use in the marine industry.
- Establish Conf… exchanged by…
- Act as a source of information on the development and implementation of OCX standard in the maritime industry.
- Encourage implementation and use of software interfaces according to the OCX standard.

The Consortium is not a separate legal entity, and this Consortium Agreement does not create a partnership or joint venture.

Distributed proposal



Open Class 3D Exchange
Consortium Agreement
dd.mm.2020

Table of Contents

Membership types

Full member

- Has one seat and voting right in the Steering Committee;
- may attend any technical workshop and meeting organized by the Consortium;
- has access to all documents and data;
- may take the role as Coordinator;
- is strongly encouraged to contribute actively to the technical goals of the Consortium

Observer

- Has no seat in the Steering Committee
- Can attend technical meetings and propose
- Has no voting rights
- Has access to Consortium documentation

OCX Public License

- The OCX is provided with a Public License free of any royalties or fees
- Open use of the standard is allowed by any party (also outside the Consortium) in unmodified form
- The standard can be modified
- In case of modifications of the standard:
  - i) the name OCX must not be used and the Consortium must not be referred to.
  - ii) the changes in the OCX standard must be published, but not under the name OCX.
- Modifications can be proposed to the Consortium as a new Working Draft by a Consortium Member

Proposed signing process

- **Three steps**
- **Step 1**: Registration of Full Members and Observer Consortium Participants
  - Distribute a form where an interested party can register membership level and contact details for the signee
  - A fixed deadline for feedback will be given, 14 days from today.
- **Step 2**: Distribute the agreement to all parties that have registered their membership
  - Invite the members to a meeting to discuss the final signing procedure and contract details
- **Step 3**: Distribute the contract for electronic signing

When signed, the Consortium is formally established.

Way forward, next meetings

Coordinator Role

- The Full member organization providing the Coordinator is nominated for one full calendar year by rotation principle.
- The Coordinator is responsible for the following tasks and functions:
  1. chairing the Steering Committee;
  2. responding to outside contacts within the scope of matters previously agreed by the Steering Committee;
  3. organization of the Steering Committee meetings (putting up agendas) and decisions of the Steering Committee;
  4. responding to any administrative and management issues of the Parties, in a timely manner;
  5. following-up on open issues from previous meetings.

DNV GL will take on the role as Coordinator for the first year

Standard development process

- The OCX development and testing is typically undertaken by a sub-group or between external project partners. This can then be input to a new Technical Draft.
  1. any Full member or Observer may send a Working Draft (WD) to the Coordinator, describing the wished evolutions of the standard;
  2. the Coordinator circulates the Working Draft to all Full members and Observers;
  3. all Full members and Observers may send comments to the Coordinator;
  4. the Steering Committee will issue the Final Draft (FD;
  5. the Steering Committee votes on the Final Draft, which, if accepted becomes a Standard Evolution (SE);
  6. the Steering Committee votes to decide which release of the standard will include this Standard Evolution.

First formal Consortium meeting

- The Consortium Coordinator will invite all full members to the first formal Consortium meeting after the contract has been signed.
- Tentative topics to be discussed:
  - Set up of the Consortium domain
  - Discussion of site content
  - Discussion of joint initiatives for promoting the standard
  - Development topics

Thank you!

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SAFER, SMARTER, GREENER