

# HYDRO SIG report

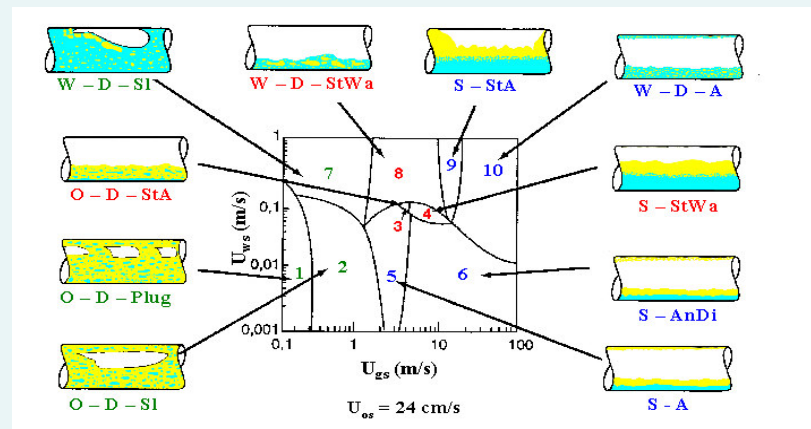
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# Outline

- ◆ **Context**
- ◆ **Progress**
- ◆ **Next steps**

# Context

- ◆ **Multiphase flows in tubes, pipes and pipelines: A complex physics with a large domain of applications**



- ◆ **Interface specification for Hydrodynamic Point Models**
  - ⇒ **One-dimensional models for characterizing flow in a pipe element**

- OLGAS 2P/3P (SPTGroup), TACITE Hydro (IFPEN), Leda Point Model (SINTEF), Unified Model (TULSA university), academic developments

# Hydro SIG charter - 2011

## ◆ Charter

- ⇒ Develop hydrodynamic interface specification

## ◆ Key Responsibilities

- ⇒ Manage the development of the hydrodynamic interface specification
- ⇒ Develop prototypes to prove the applicability of the standard
- ⇒ Contact organizations and companies that may be interested in hydrodynamic interfaces and propose them to join the SIG (CO-LaN membership mandatory)

## ◆ Deliverables

- ⇒ Didactic documentation to promote the utility of the standard
- ⇒ Document describing the hydrodynamic interface specification and the main scenarios of usage for these interfaces
- ⇒ Scope of work, responsibilities and planning for the implementation of prototypes
- ⇒ Prototypes implementing the interface specification

# Progress - 2012

- ◆ **Current SIG members**
  - ⇒ IFP Energies nouvelles (SIG leader), SPT Group, Total, Kongsberg O&G Technology, RSI-Dynamic Simulation Solutions, Infochem Computer Services, SINTEF, **Piping Systems Research and Engineering Co**
  
- ◆ **Specification document (published)**
  - ⇒ **Request for Comments Form launched**
    - Document needs to be reviewed and accepted by a large group of organizations involved in hydrodynamics
    - Authorization from the board to disseminate the information to non-members (2011)
  
- ◆ **Publication of the API (HydroServer.idl)**
  
- ◆ **First prototyping of interfaces developed in 2011**
  - ⇒ Prototype tested with success by SPT Group and PSRE Co beginning of 2012

# Next steps

- ◆ **Finalize documentation of the prototype to accompany the source code**
  - ⇒ **Source code available on CO-LaN website**
- ◆ **Send "Request for Comments" to main organizations involved in hydrodynamics**
  - ⇒ **List of contacts under preparation**
- ◆ **Update documentation with RFC feedbacks and issue a first version of interfaces**
  - ⇒ **Following CO-LaN validation process**

***Thank you for your attention!***