Panel Discussions

The panel discussions are intended to entail debate among the panelists, as well as between the panelists and the audience. The discussions revolve around a suggested set of topics, which follow the theme(s) set by key note speaker(s). A moderator controls each discussion, while a compiler writes down keywords from the debate (possibly displayed in real time on a canvas).

Panel Discussion 1

Panel discussion 1 follows two industrial keynote presentations:

- The Maritime Regulatory Regime (Per Martinsen, Det Norske Veritas)
- The Digital Big Bang: A Challenge for Maritime and Offshore Safety (Asgeir J. Sørensen, Marine Cybernetics)

Title:

- **Industrial Real-Life Challenges: Beyond Stability Theory?**

Day:

- Thursday February 15 2007

Time:

- 15.00-17.00

Moderator:

- Asgeir J. Sørensen (Marine Cybernetics; verifier)

Panel:

- Per Martinsen (Det Norske Veritas; classifier)
- Jann P. Strand (Rolls-Royce Marine; vendor)
- Bjørn Gjelstad (Kongsberg Maritime; vendor)
- Mogens Blanke (DTU; researcher)*
- Thor I. Fossen (NTNU; researcher)

Compiler

- Morten Breivik (NTNU)

Suggested topics (strategic and tactical issues):

- The regulatory hierarchy:
  - The general dynamics of the regulatory hierarchy.
  - How does the regulatory hierarchy (IMO, DNV, MC, etc.) prepare for increasingly sophisticated technology?
  - How does the regulatory hierarchy affect the marine and maritime industries in terms of slowing down the introduction of new technology (is the “filtering” both a blessing and a curse)?
- Development of new technology:
  - How does new technology get accepted (at the intersection between contractors, vendors, classifiers, etc.) and what is the nominal time frame of acceptance?
  - What factors drive the development of new technology (e.g., costs, safety, increased functionality)?
  - Phase shift from mechanical to computer-based industry.
  - Humans and technology.
  - Operations-driven technology development.
- Academic research and industrial needs:
  - Basic research vs. applied research.
  - Is there a (mis-)match between academic research and industrial needs?
  - How can academia and industry best cooperate to create advanced technology?
  - What does the industry require from academia?
  - The need for mathematical verification of industrially implemented methods.
  - Will the needs of the industry always be ahead of the capabilities of academia?

    - Intellectual property (IP) philosophies for research cooperation (patent vs. no patent).
- Current and future industrial challenges:
    - What are currently the biggest technology challenges for the industry?
    - What are the future challenges (and possibilities) for the industry?
    - How can academia help the industry in reaching its goals?

Panel Discussion 2

Panel discussion 2 follows one industrial keynote presentation:

- Applications and Possibilities for Unmanned Vessel Technology (Vegard E. Hovstein, Peregrine Dynamics)

Title:

- **Unmanned Technology: The Future?**

Day:

- Friday February 16 2007

Time:

- 14.00-15.00

Moderator:

- Morten Breivik (NTNU; researcher)

Panel:

- Vegard E. Hovstein (Peregrine Dynamics; developer)
- Asgeir J. Sørensen (Marine Cybernetics; verifier)
- Erik Kyrkjebø (NTNU/Sintef; researcher)
- Jerome Jouffroy (Kongsberg Defence & Aerospace; vendor)

Compiler:

- Jon Refsnes (NTNU)

Suggested topics (strategic and tactical issues):

- Operational advantages:
    - Under which operational conditions can unmanned technology first and foremost become a success (e.g., so-called 3G environments; dirty, dull, and dangerous)?
    - Where is unmanned technology a goal?
    - What is the alternative to an unmanned future (e.g., with respect to costs, safety, accuracy, flexibility, robustness, applicability, heterogeneity, etc.)?
    - What can unmanned vehicles achieve which manned vehicles cannot?
- Business concepts:
    - What business concepts lie at the core of a possible unmanned revolution?
    - Where will the applications evolve from (e.g., military, science, business, etc.)?
    - What is the role of small start-up companies in developing experimental technology such as, e.g., unmanned surface vessels (USVs)?
- Disruptive potentials:
    - Will unmanned technology be disruptive toward the established industry?
    - Should parts of the established industry feel threatened if they don't jump the "unmanned bandwagon"?
    - Is the established industry prepared for a potentially radical shift from manned to unmanned vehicles?
- Legislative aspects:
    - What legislative aspects have to be clarified for unmanned vessels to enter manned seaspace?
    - Will (should) unmanned vessels ever have the same rights as manned vessels?
- Autonomy:

    - Autonomous capability is not necessarily implied by unmanned vessels; how far is the step from unmanned human-in-the-loop systems to completely autonomous systems?
    - When are autonomous vessels an advantage?
    - Where is autonomous technology a goal?
- Time frames:
    - What time frames are associated with the introduction of unmanned (and also autonomous) technology?
    - When will unmanned (autonomous) technology be put to good use in, e.g., the offshore industry?

*Yet to confirm suggested role for panel discussions