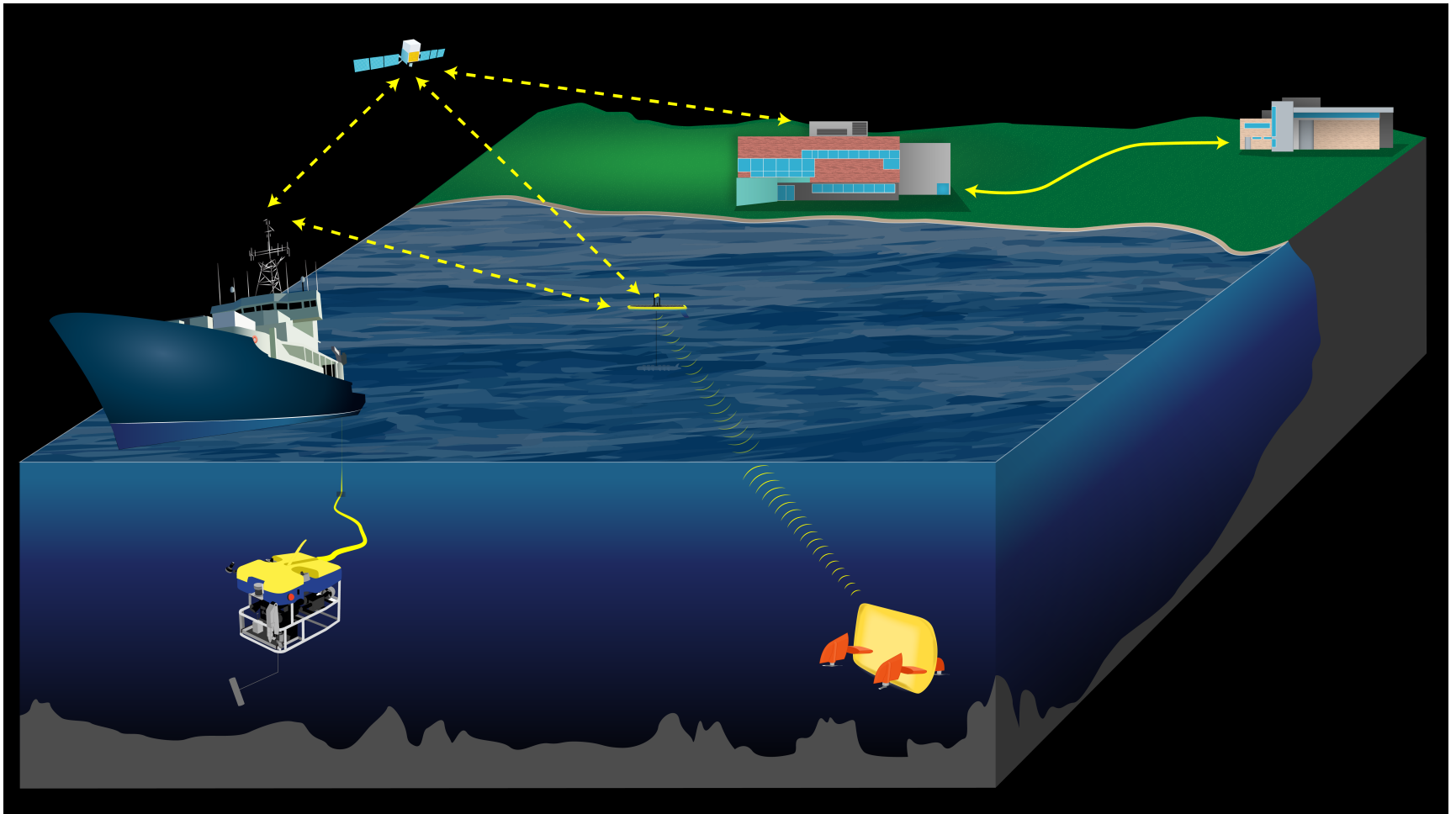


DESSC Subcommittee Telepresence-Enabled Science Missions

(Lack of) Progress Report



Report Status

- First draft of report completed and feedback solicited since last DESSC meeting.
- Original plan was completion for this DESSC meeting and submission to Deep Sea Research on the same timeline.
- CRG family issues in Jan-Mar 2018 mean that timeline is now running ~2 months late so new plan is to be ready to submit to DSR before Aug 20 when Chris goes to sea.

Dec. 2018 Recap: *Draft* Recommendations

- 1) Done well, telepresence is sufficiently beneficial to be worth pursuing
- 2) Effective telepresence requires detailed advanced dive planning
 - NDSF dives only benefit from the same discipline: should not be a burden
 - Sentry = requirement / Alvin = best practice / Jason = more effective dives
- 3) Effective telepresence will also require **two-way** communications:
Shore to ship communications as well as Ship to Shore.
Band-width costs for a cruise = comparable to 1 day of UNOLS shiptime
- 4) Effective use of telepresence from a remote location (e.g. home laboratory) will benefit from a progression that includes: experience both at sea *and* in a structured on shore environment (e.g. URI's Inner Space Center).
- 5) To implement telepresence for research, we recommend that a PI's easiest path to success would be to restrict shore-based participation to "by invitation only" – i.e. an on-shore extension of the similarly selected sea-going cruise participants.

(4) & (5) began to be investigated in 2014 [NSF TREET project] and ops research continues in 2018-19 [NASA/NOAA SUBSEA: Nautilus Loihi cruise, Aug 22-Sep 10].
- 6) To broaden *awareness* of Telepresence among ocean scientists, NOAA-OER and OET should routinely inform DeSSC/UNOLS of forthcoming Okeanos Explorer & Nautilus cruises & participation options.