

San Francisco Ferry Schmooze

Tuesday October 21 2003

MOOSE SEES FAMILY, FAMILY SEES MOOSE:

Enviros, politicos, and techies talk ferries in San Francisco.

"There's no charge - it's worth more for my moose to see your family than for your family to see my moose." So says the punch line from an old Down-East joke, and it became the "vision" of the first "Ferry Schmooze" following the World Maritime Technology Conference (WMTC) and Society of Naval Architects and Marine Engineers (SNAME) annual meeting. Organized by the Maritime Economics Panel (O-36) of SNAME in conjunction with the San Francisco Water Transit Authority, the October 21 "schmooze" format was a round-table workshop conference designed to give various players an opportunity to bring divergent perspectives together in an informal environment. Discussions following the formal presentations were moderated by local naval architect Ryan Young, one of the Schmooze organizers.

The program was kicked off by Chris Barry, representing Panel O-36, who, after noting his resemblance to a walrus, spoke of many things, presenting a general overview of ferry issues including speed, hull form, propulsion, size and regulations. He explained that key regulations defining the size of the vessel for regulatory purposes will be radically changed soon. This will change vessel design and construction, and may make ferries less expensive to build and operate. He also noted that modern computer based ship construction techniques could allow profitable construction of ferries in the Bay Area, which could provide several hundred local jobs.

Drew Eisele and Manish Gupta of CDI Marine discussed software techniques for rapid optimization of ferry design. This software is able to instantly evaluate the effect of changing vessel characteristics such as required speed, passenger space, pollution control equipment or many other constraints on the first cost and operating cost of a ferry. This process in turn will allow optimization of the system design as a whole, considering the effect of vessel requirements on the overall system.

James Sweeney, of Seaworthy Systems, described a fuel cell powered water taxi. Not only does the boat use fuel cells to charge its electric drive system, but used an innovative method for storing the hydrogen to run the fuel cell in a safe, room temperature water solution: Sodium hydroborate dissolved in water gives off hydrogen when catalyzed, and used solution is stored aboard for return to the fueling station, rehydrogenation and subsequent reuse. The boat was demonstrated the day before, carrying numerous WMTC attendees along the waterfront. At only 30 feet in length, this vessel is believed to be the world's largest operational passenger-carrying fuel cell powered vessel.

Charles Walther, of Walther Engineering, discussed numerous issues involving his experiences supporting design and construction of the new Peralta class ferries for the city of Alameda. He discussed many practical issues including engine and shafting, aluminum quality, and a rudder design change which reduced required power by several hundred horsepower while also eliminating cavitation and corrosion damage.

Teri Shore of Bluewater Network presented an overview of pollution comparisons between ferries and alternative modes of transportation in New York, noting that ferries will need to use the best available technology to match other clean modes. Most participants gave the discussion following Teri's report the highest marks for interdisciplinary value: Advocates were impressed by how difficult it will be to achieve emissions numbers that satisfy the environmental community, and environmentalists were exposed to a good discussion of some of the technical factors that control these numbers.

Paul Kamen, Berkeley Waterfront Commissioner and naval architect, finished the presentations, covering political obstacles to ferry service and an alternative approach to vessel design, fare structure and passenger amenities that address some of these issues. He emphasized the importance of short routes and appropriate speeds to minimize emissions, and siting terminals near existing infrastructure (deep water, parking, bus routes) to minimize negative environmental impacts. He also noted that a ferry design with sufficient deck space could carry bicycles and dogs and thereby gain the support of key Berkeley political constituencies.

Other participant included former Albany mayor and councilmember Allan Maris (also a naval architect) and Jeri Holan (an architect of the non-naval variety) representing the Berkeley/Albany Ferry Committee. Other political activists and marine professionals provided a range of experience and divergent views to the discussions following each presentations. Despite the alternative vision statement, "WMTC Ferry Smackdown," no blood was shed and the group was able to exchange methods, tools and technologies to better understand the choices involved in a clean, cost effective ferry system. Much of the formal presentation material will be available soon at <http://www.well.com/user/pk/waterfront/FerrySchmooze/>.

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