At the University of Rijeka, Faculty of Maritime Studies, navigation simulators have been in use since the moment they appeared in the world. They are part of the regular teaching process (lectures/exercises) at the undergraduate and graduate level in the study program Nautical Studies and Maritime Transport Technology. In the process of training seafarers, navigation simulators are used for acquiring specialist authorizations of participants by training and mastering specialized training programs in accordance with the specific needs of shipping companies. They are also used for the purposes of expertise in maritime accident, for the preparation of specific maritime studies and studies in berthing and unberthing certain types of ships in the waters of Croatian ports and all over the world. Furthermore, navigation simulators are also used for scientific research especially for validation specific research models in function of journal scientific paper publishment.

To monitor new technological solutions on vessels and develop sophisticated ship management systems, the Faculty is continuously upgrading navigation simulators to meet new requirements. In the last few years, the Faculty has acquired two new navigation bridges with the consoles and computers with an appropriate software system.

In 2016, the existing Full Mission Bridge (FMB) was upgraded to a new software version NTPRO 5000. In the anteroom of the main FMB NTPRO 5000 there are two additional navigation bridges, each equipped with ship consoles with Conning stations - one (on bridge 1) and two (bridge 2) MFD stations (Multi-Function Display).

Each MFD is equipped with ECDIS Transas Navi Sailor together with RADAR Navi Sailor.

Additional navigation bridges are also equipped with Dynamic Positioning (DP) workstations.

Both bridges are equipped with one visualization channel performed via an LCD projector and a DP workstation.
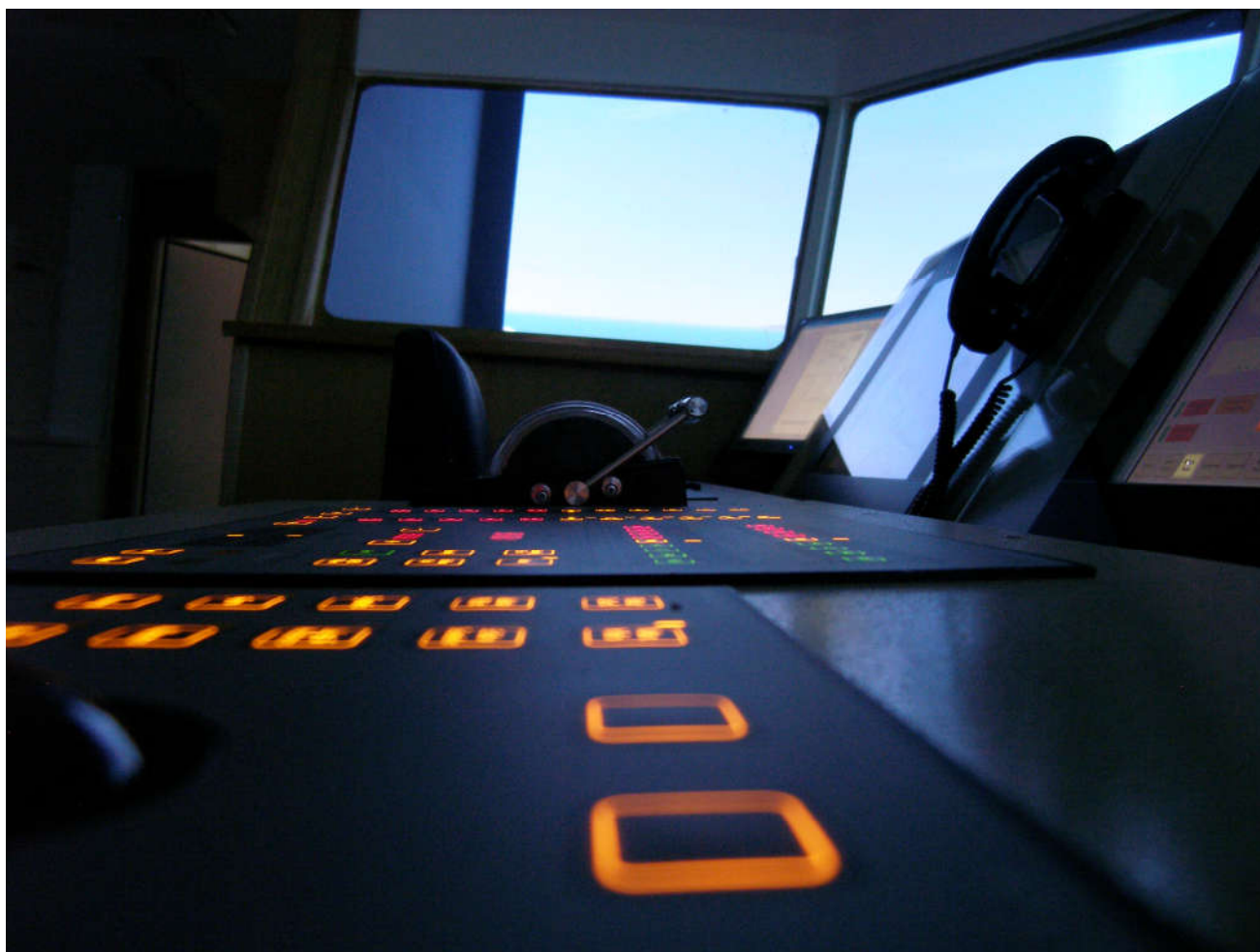
The bridges are functionally connected to the main large bridge (NTPRO 5000) in such a way that common complex exercises can be performed, for example: mooring a ship with the two tugboats, complex collision avoidance at sea, etc.

The entire system of the existing simulator has been upgraded to the NTPRO 5000 navigation simulator version with an improved hydrodynamic model, new instructor station functionalities, more realistic visualization (of approximately 180°, which enables realistic display of prepared scenarios) and other functionality improvements in accordance with the amended STCW regulations. As a special extension to the NTPRO 5000 navigation simulator, a special station for modelling the navigation area has been installed Transas Model Wizard. This complex software allows modifying existing areas of navigation to make changes in, for example navigational lights, changes in port infrastructure, etc. In general, the simulator is equipped with a total of 50 ship models for which the exercises can be created at the total number of 48 port areas thus enabling the provision of a large number of different exercises.

During 2017 and 2018, investments were continuously made in the navigation simulator; the simulator server and all older computers were replaced. The ECDIS software has been upgraded to the latest version, which includes all necessary changes in the display of signs and symbols on the ENC according to IHO standards, current changes in IHO and IMO regulations, or performance standards for marine navigation equipment - IMO A.817 (19), IMO MSC 191 (79), IMO MSC 232 (82), IEC 80/598, and DNV classification standards for marine navigation simulators, etc.

In 2019, the old visualization system was changed by installing new laser video projectors that provide a high-resolution image and lower maintenance needs.