Making documentation relating to the marine codes and formats available on the web

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Introduction
Marine codes and formats have been changed several times in the long history of marine observation and data accumulation. Because codes and formats prescribe the way of recording observations and therefore influence the quality of the data record, it is necessary to understand the code and format change in order to make correct interpretation of the data record contained in long term archives. A study on the history of marine codes and formats was carried out based on the WMO documents which has been providing regulations and international standards for marine observations and how to record the observations since the early days of international exchange of marine data. Along with the study, an effort to digitize past WMO CSM/CBS and CMM summary reports, in which resolutions, recommendations and those annexes relating to codes and formats changes are contained, was made. The digitized summary reports are made available on the web, so that they could be easily referred by all people concerned to facilitate the study that use the historical marine observations.

A study on the history of marine codes and formats
Changes of the marine ship code for maritime meteorological data exchange, the IMMPC (International Maritime Meteorological Punch Card) / IMMT (International Marine Meteorological Tape) format for long-term archives, and the MQCS (Minimum Quality Control Standard) for marine meteorological data quality control were traced based on the past WMO documents such as Manual on Codes, Guide to Marine Meteorological Services, and meeting reports of CSM/CBS and CMM/JCOMM sessions.

Result of the study was summarized in tables which contain concise description of each change, the date when the change become in effect, and the reference of resolution and recommendation concerning the change. Each of these references is linked to the full text of relevant resolution or recommendation and its annexes, so that users could reach the original complete information on the change.

The study was extended to oceanographic code such as BATHY and TESAC for sub-surface profile data, ORF/TERRIBUCY for drifting and moored buoy and TRACKOB for underway oceanographic observations.

Digitization of past publications on codes and formats
Among a lot of marine meteorological related publications, summary reports of the past sessions of WMO CSM (Commission for Synoptic Meteorology) and CBS (Commission for Basis System, the successor of CSM), which is in charge of all meteorological codes including marine codes for real time international exchange, and CMM (Commission for Marine Meteorology), which is in charge of marine data format and quality control procedure, such as IMMPC/IMMT and MQCS, were digitized. All the scanned image files were converted into searchable PDF files under the NOAA Climate Database Modernization Program (CDMP), and made available on the web.

Each reference is linked to the full text of relevant resolution or recommendation and its annexes.