



Visualization of global Argo metadata - A comprehensive view of contributions by Data Assembly Centers

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Argo is an internationally coordinated program in which 3000 floats are seeded into the global ocean. Ever since its inception, the Argo program is complementing the ocean observations which are otherwise taken by ship-based CTD's and XBT/XCTDs. With the achievement of the target in November 2007, Argo is contributing 1, 00,000 profiles per year to the oceanographic community. The data from these platforms have grown enormously and the state of the art techniques like big data and data analytics are needed to effectively handle them. In this work a comprehensive visualization of global metadata of the floats deployed and maintained by various countries, Data Assembly Centers are shown. The metadata is effectively managed to visualize plots like bubble plots of DACs contributions, yearly growth of float contribution by each DACs, data availability from each of the floats with different color codes are visually shown. A user can play with the range of data by choosing the time periods of choice, which will result in on the fly generation of a wide range of plots from which user can make valid decisions. This system also gives feasibility of downloading chosen ARGO data as per user requirements. Spatial distribution of the floats locations in all major oceans is shown and filters application results in the automatic regeneration of plots. A comprehensive visualization system of this nature saves the time and efforts in a repeated generation of the plots for demonstration to administrators and cruise planners. As this system is built on the index files provided by Global Data Assembly Center changes in the data at the global levels will allow automatic enhancements of the data and plots resulting in optimization of the efforts.