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comprehensive exploration of the IDC infrasound pipeline

At the International Data Centre (IDC) real-time data goes through a three-step process to determine if there is an event. These three steps in seismic/hydro/infrasound (SHI) operations are station processing, network processing and interactive review. Inside each of these steps are algorithms that conduct various tasks (e.g. detection, categorization, location). Many of these algorithms, especially for infrasound, have been changed, adjusted or replaced over the years. Here, we delve into the IDC infrasound pipeline from how the process was envisioned in its development to the current iteration and beyond. Over the years, the IDC infrasound pipeline has separated from the other SHI technologies due to the uniqueness infrasound data possesses. For example, Detection and Feature Extraction (DFX) has been replaced by Progressive Multi-Channel Correlation (PMCC) for detections. Elsewhere, Station Processing (StaPro) and libraries in the Global Association (GA) conglomerate have been tailored or rewritten to improve infrasound characterization, and association. The results of this presentation will outline and explain the detailed criteria, thresholds, and parameters of the current IDC infrasound pipeline. Gaining detailed knowledge of the capabilities and weaknesses of the pipeline, future assessments for improvements and demands will be easier to evaluate and implement.

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