# of NET-VISA in Operational and Test Environments and Implications for the Event Definition Criteria

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This study reviews performance of NET-VISA in operations (vsel3) and results of a full pipeline test of NET-VISA from 2021 in comparison with SELs. NET-VISA performed better than the standard global associator, GA, however several differences in how these algorithms form events were identified. These differences provided fewer constraints in event formation for NET-VISA in comparison with GA, namely creating some events that are not compliant with existing event definition criteria (EDC). Applying the EDC to the NET-VISA output lessens the performance of NET-VISA by 5%. Application of the EDC affects the number of events created in the automatic bulletins, which are reviewed for inclusion into the Late Event Bulletin (LEB). LEB events must then comply with the EDC before entering the Reviewed Event Bulletin (REB). The number of LEB events not propagating to REB increased with time from 4% in 2002 to 26% in 2022 and is correlated with the increase in number of stations, contributing to the bulletins. The development of the EDC dates from GSETT-3 and were designed to limit the load on analysts and automatic processing. Accumulated experience in processing and analysis over last ten year provides sufficient data to revise existing EDC and propose alternative approaches to producing products for verification purposes

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Promotional text

We present a review of performance of NET-VISA in comparison GA, influence of existing EDC on the automatic seismic, hydroacoustic and infrasound products and REB and propose alternative ways to design EDC.

Oral preference format

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