Proposal Abstract K10(G70)

1. **Arms Control Problem:**
   Nuclear weapons - comprehensive test ban

2. **Verification Type:**
   (a) Seismic sensors - international network
   (b) International exchange of information
   (c) International control organization

3. **Source:**
   United Kingdom. "Working paper concerning verification of a comprehensive test ban treaty". CCD/296, 28 July 1970.

4. **Summary:**

This paper describes in detail a hypothetical international network of 26 seismic stations (seven of which presently exist), the system's capacity to detect and identify seismic events, and its cost. The system envisages 4 stations established in the Soviet Union.

In the Northern Hemisphere 90 percent of all earthquakes down to a magnitude of m_b 4 (1-2 kt in hard rock) would be detected by at least 4 stations (location) and 3 stations (identification). For nuclear blasts the threshold would be about m_b 4.5 (3-6 kt in hard rock) for identification.

A data collection and collation centre would be established as part of the system to maintain common standards of operation, quality control and reporting. This centre would collate and store data that would be provided to any state party on request. It could also, if desired, present analyses of the data.

The estimated cost of installing the system would be £15 million with an operating cost of £5 million per year.* Each country would staff its own stations. It is believed that the system could be established within 5 years.

The paper also cursorily evaluates some evasion techniques ("decoupling", masking during earthquakes, and simulating earthquakes).

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* This cost estimate is later reduced. See: CCD/351 of 23 September 1971 and CCD/386 of 22 August 1972.