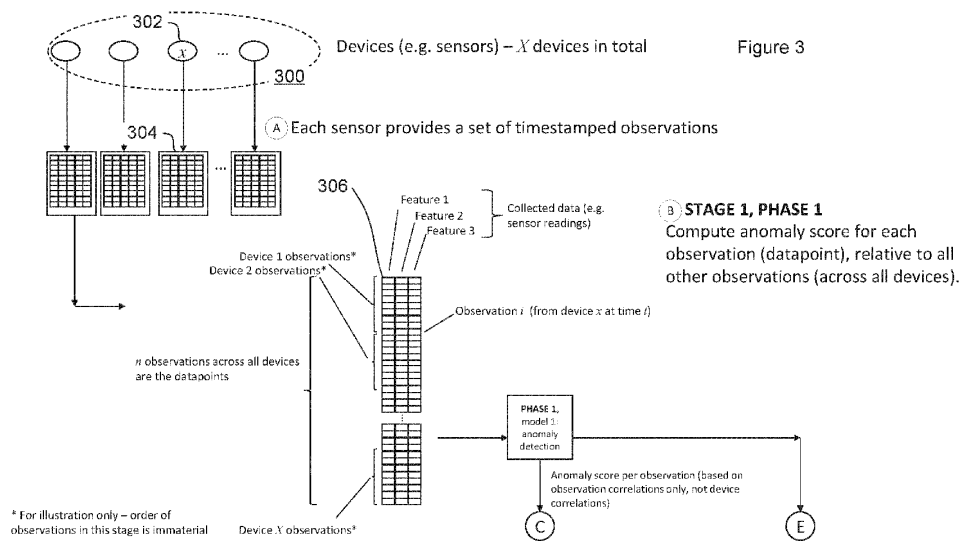




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(54) Title: ANOMALY DETECTION IN NETWORKED ENTITIES



(57) Abstract: In a two-phase anomaly detection applied to observations collected from networked entities, observation anomaly scores are obtained in phase 1. In phase 2, the observation anomaly scores are structured as a data matrix, each row of the data matrix corresponding to a time period and each column corresponding to an entity device of the set of networked entities. At least one time period of the data matrix as anomalous. Causal information about the at least one anomalous time period is extracted based on an angular relationship between a second-pass coordinate vector of the at least one time period and a second-pass coordinate vector of at least one entity of the set of networked entities, the second-pass coordinate vectors determined by applying a second-pass singular value decomposition (SVD) to a residuals matrix computed between the data matrix and an approximation of the data matrix via truncated SVD.

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