Based on the provided predicates and their structure, here is how an assurance case for Instant Messaging (IM) software can be presented in a hierarchical tree structure using Goal Structuring Notation (GSN):

### Instant Messaging (IM) Software Security Assurance Case

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- Goal (G1, IM software is acceptably secure in a networked environment)

- Context (C1, Definition and description of IM software)

- Context (C2, Definition and description of a networked environment)

- Context (C3, Definition of acceptably secure)

- SupportedBy

- Strategy (S1, Argument of that software assets are under protection)

- Justification (J1, Protection of software assets supports that software is acceptably secure)

- SupportedBy

- Goal (G2, All identified IM software critical assets are protected)

- Context (C4, List of IM software critical assets)

- Justification (J2, Relationship between assets is clear and can be argued separately)

- SupportedBy

- Strategy (S2, Respective arguments of IM software critical assets)

- SupportedBy

- Goal (G3, IM software critical asset is protected)

- HasMultiplicity (S2, G4, number of software critical asset = 4)

- SupportedBy

- Strategy (S3, Argument of the type which the IM software critical asset belongs to)

- Context (C5, List of software critical asset types in PEDD)

- Justification (J3, Types of software assets are according to PEDD)

- SupportedBy

- Goal (G4, IM software critical asset which belongs to client data is protected)

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\*\*Explanation of Predicates Used:\*\*

1. \*\*Goal (G1, description)\*\* signifies the primary objective of the assurance case, which is to demonstrate that the IM software is acceptably secure within a specified system (in this case, a networked environment).

2. \*\*Strategy (S1, description)\*\* introduces the approach taken to support the main goal G1, focusing on ensuring that all software assets are protected.

3. \*\*Context (C1, C2, C3, etc., description)\*\* provides necessary background and definitions pertinent to understanding and interpreting the goals and strategies.

4. \*\*Justification (J1, J2, J3, description)\*\* offers a rationale for why the adopted strategies and the relationships between portions of the argument are reasonable and relevant.

5. \*\*SupportedBy\*\* denotes hierarchical relationships where strategies support goals or lower-tier goals support higher-tier goals.

6. \*\*HasMultiplicity (S2, G4, label)\*\* explains that multiple instances of a specific type of goal (G4) are supported or necessitated by strategy S2. This is illustrated by ensuring that various software critical assets, classified under different types in the Protective, Electronic Data Disposal (PEDD) policies, are protected.

In this tree, placeholders from the pattern are instantiated with specifics related to IM software, ensuring clarity and relevance of the assurance case for stakeholders.