To create a security case for ACAS Xu (Airborne Collision Avoidance System Xu) based on the given security case pattern and predicates, we will instantiate its pattern using the information specific to the system. The placeholders will be replaced with "ACAS Xu" or relevant details, and the structure will be depicted in a hierarchical tree format using dashes.

\*\*Security Case: ACAS Xu\*\*

- Goal (G0, ACAS Xu satisfies security requirements)

- Context (C0, Description of ACAS Xu)

- Context (C1, Security requirements are about protecting the system from malicious entities)

- Justification (J0, The argumentation is based on satisfaction of security requirements)

- Assumption (A0, System SRS are complete, adequate, and consistent)

- Strategy (S0, Argue through asset protection and secure development requirements)

- Goal (G1, ACAS Xu satisfies the asset protection requirements)

- Assumption (A1, Asset inventory is established)

- Strategy (S1, Argue through the different stages of the system development life cycle)

- Goal (G3, Asset protection requirements are met during the architecture design phase)

- Context (C2, Description of the architecture)

- Strategy (S2, Argue through deriving security threats from SRs)

- Justification (J1, Detection and mitigation of threats fulfill SRs)

- Goal (G5, ACAS Xu architecture is protected against identified security threats)

- Assumption (A2, All relevant threats have been identified)

- Strategy (S3, Argue over each security threat)

- Goal (G0.X, ACAS Xu architecture is protected against STX) [Undeveloped and Uninstantiated]

- Goal (G6, ACAS Xu architecture is validated) [Undeveloped]

- Context (C3, Description of ACAS Xu architecture model)

- Assumption (A3, ACAS Xu architecture model is well defined in {formal method})

- Goal (G4, Asset protection requirements are met during other phases) [Undeveloped]

- Strategy (S2) and Goal (G6) are marked as undeveloped and uninstantiated, reflecting parts of the assurance case that require further specification and evidence collection. Key assumptions reflect completeness, adequacy, and consistency of the system's security requirements, and a well-defined asset inventory.

This model explicitly addresses the protection of the ACAS Xu architecture through various phases of its life cycle and against distinct security threats. Each element's relationship and depth are defined to maintain clarity and organization of the security case structure.