Here's the instantiated security case for ACAS Xu (Airborne Collision Avoidance System Xu) in a hierarchical tree format based on the provided security case pattern:

```

G0: ACAS Xu satisfies security requirements

- C0: Description of ACAS Xu

- C1: SR are requirements about protecting the system from malicious entities

- J0: The argumentation is based on the satisfaction of SRs

- A0: System SRS are complete, adequate, and consistent

-- S0: Argue through asset protection and secure development requirements

--- G1: ACAS Xu satisfies the asset protection requirements

---- A1: Asset inventory is established

---- S1: Argue through the different stages of the system development life cycle

----- G3: Asset protection requirements are met during the architecture design phase

------ C2: Description of the ACAS Xu architecture

------ S2: Argue through derivating security threats from SRs

------- J1: Detection and mitigation of threats fulfill SRs

------- G5: ACAS Xu architecture is protected against identified security threats

-------- A2: All relevant threats have been identified

-------- S3: Argue over each security threat

--------- G0.X: ACAS Xu architecture is protected against STX (undeveloped, uninstantiated)

------- G6: ACAS Xu architecture is validated (undeveloped, uninstantiated)

-------- C3: Description of ACAS Xu architecture model

-------- A3: ACAS Xu architecture model is well defined in formal method (uninstantiated)

----- G4: Asset protection requirements are met during other phases (undeveloped)

--- G2: ACAS Xu satisfies secure development requirements (undeveloped, uninstantiated)

```

### Explanation:

- \*\*Root Level (G0)\*\*: The topmost goal states the overarching security objective for ACAS Xu. It is supported by a strategy (S0), contexts (C0, C1), a justification (J0), and an assumption (A0) to provide a thorough grounding for the argument.

- \*\*Second Level (G1, G2)\*\*: These goals delve into asset protection and secure development, details provided by A1, with G2 being undeveloped and uninstantiated.

- \*\*Third Level (S1)\*\*: Strategy to argue through different stages of system development.

- \*\*Fourth Level Goals (G3, G4)\*\*: G3 and G4 discuss asset protection during specific phases of development. G4 remains undeveloped to highlight areas needing further details or proof.

- \*\*Fifth Level (S2, J1, G6)\*\*: S2 supports G3 by deriving security threats specific to the phase (design or otherwise). G6 remains undeveloped and uninstantiated.

- \*\*Sixth Level (G5)\*\*: Focuses on protection against specific security threats and is supported by an assumption (A2) about threat identification.

- \*\*Seventh Level (S3 and G0.X)\*\*: S3 leads to the instantiation of G0.X, providing details on protecting against an unspecified security threat (STX), which currently remains both undeveloped and uninstantiated.

This instantiated structure specifically targets the ACAS Xu system, replacing generic terms and assumptions with ACAS Xu specific content where needed. This approach helps ensure that all aspects of the assurance case are tailored to effectively address the unique security concerns of the ACAS Xu system.