Key Upgrades for 3.0

1. **Fatigue Simulation Overhaul**
   * Dynamic fatigue accumulation during combat (15% faster)
   * Active recovery during downtime (20% recovery rate)
   * Fatigue effects:
     + Reduced radar usage at >60% fatigue
     + Random countermeasure failures
     + Skill degradation proportional to fatigue
2. **Human-Like Combat Behaviors**
   * **Hesitation System**: Low-skill pilots freeze for 2-6 seconds
   * **Threat Perception**: Dynamic threat modeling with memory decay
   * **Role-Specific Errors**: Bombers forget countermeasures, fighters misjudge BVR range
3. **Advanced Tactical Profiles**

TACTICAL\_PROFILES = {

INTERCEPTOR: {BVR @ 15-80km, evade="BEAM"},

AIR\_SUPERIORITY: {BVR @ 5-50km, evade="NOTCH"},

CAS: {GUNS/ROCKETS @ 1-10km, evade="TERRAIN"}

}Skill-Based Adaptation

Pilots classified by aircraft type:

| Aircraft | Min Skill | Max Skill |

|----------------|-----------|-----------|

| Fighters | 65% | 98% |

| Bombers | 45% | 88% |

| Helicopters | 55% | 92% |

| Attack Planes | 60% | 90% |

DCS 2.9 Compatibility

Modernized event handling (world.addEventHandler)

Coalition-agnostic initialization

Asynchronous scheduling for performance

Real-World Impact in DCS

Interception Scenario:

\*An ACE-level MiG-31 (98% skill):\*

Detects threat at 70km → switches to BVR\_ENGAGEMENT

Uses beam maneuver + chaff when SAMs activate

Fatigue accumulates after 8 minutes → radar usage drops 30%

Breaks off when threat >90%

CAS Mission Gone Wrong:

\*Rookie A-10 pilot (60% skill):\*

Hesitates 4 seconds when AAA fires

Forgets flares at 40% fatigue

Switches to terrain masking after missile launch

Skill drops to 42% under sustained threat

System Architecture

A screenshot of a computer

AI-generated content may be incorrect.

Activation Sequence

1. 10-second delayed start
2. Scans all coalitions for aircraft groups
3. Initializes each group with:
   * Role-specific skill level
   * Fatigue baseline (0%)
   * Default tactic (PATROL)
4. Starts asynchronous loops:
   * Tactics adjustment (every 8-15s)
   * Fatigue updates (every 30-60s)
   * Threat assessment (every 4-8s)

**Output**:  
⚡ TANUKI AI v3.0 ACTIVATED ⚡  
🤖 Adaptive Tactics | 😴 Fatigue System | 🎯 Precision AI