Audio System

- **Music:** Chiptune-style retro soundtrack with atmospheric cyberpunk tracks
- **Sound Effects:** Retro-styled audio cues for actions, alerts, and events
- **Dynamic Audio:** Music intensity changes based on detection level# Rogue Signal Protocol - Traditional Roguelike Design Document v7.0 **Network Stealth Dungeon Crawler**

Executive Summary

Rogue Signal Protocol is a stealth-focused traditional roguelike where you play as a hacker's consciousness trapped in cyberspace. Navigate procedurally generated network dungeons using stealth, observation, and tactical combat. Master enemy patrol patterns, hide in shadows, and strike from stealth - or face the relentless Admin Avatar hunting you through the network.

Core Experience: Classic roguelike structure with pure stealth focus - observe, hide, strike, escape.

Core Gameplay Loop

The Stealth-First Structure

- **Movement:** Grid-based, 8-directional, always silent
- **Stealth:** Observe patrols, avoid vision, hide in shadows
- **Combat:** Bump-to-attack OR stealth strikes for massive damage
- **Time:** Turn-based - everything moves when you do
- **Death:** Permanent - restart from Tutorial (Level 0)
- **Goal:** Reach the gateway while staying undetected

Network as Dungeon

Traditional Roguelike	Rogue Signal Protocol
Dungeon Floor	Network System
Room	Node
Corridor	Connection
Monster	Security Process
Treasure	Equipment
Stairs	Network Gateway
Potion	Data Patch

All references throughout this document use these standardized terms.

Game World

Network Size & Layout

Standard Size: 50x50 grid for all network systems

- Optimal for tactical stealth gameplay
- Consistent experience across all levels
- Manageable scope for procedural generation

Network Progression (4 Levels)

0. **Tutorial Network** (First-time only)
    - Fixed, hand-designed layout for consistent learning
    - 3 enemies, basic patrols
    - 50% shadow coverage
    - Detection builds slowly to teach timing
    - Admin Avatar spawns at 100% detection
1. **Corporate Network** (Level 1)
    - 8 enemies, simple patrols
    - 40% shadow coverage
    - Admin Avatar spawns at 100% detection
2. **Government System** (Level 2)
    - 12 enemies, mixed behaviors
    - 25% shadow coverage
    - Admin Avatar spawns at 75% detection
3. **Military Backbone** (Level 3)
    - 16 enemies, coordinated patrols
    - 15% shadow coverage
    - Admin Avatar spawns at 50% detection

Stealth System

Core Mechanics

Vision: Each enemy has variable sight ranges (2-6 squares, circular 360°) **Detection:** Binary system - you're either seen or hidden **Shadows:** Marked with ◊ symbol, provide complete concealment **Walls:** Block line of sight for both player and enemies

Vision Display

Enemy vision is always visible when the enemy is within player's sight range, displayed as circular areas around each enemy. This allows players to:

- Study patrol patterns in advance
- See exactly where vision gets blocked by obstacles
- Plan routes through gaps in coverage
- Understand the tactical landscape at all times

Enemy States

- **Green:** Unaware of your presence
- **Yellow:** Sees you but hasn't alerted yet (1 turn grace period)
- **Red:** Actively tracking and has alerted nearby enemies

Patrol Types (3 Categories)

1. **Static (S):** No movement, guards key areas
2. **Linear (L):** Multi-point patterns (A→B→A, A→B→C→A, A→B→C→D→A, etc.)
3. **Random (R):** Unpredictable movement with 3-turn UI prediction

Random Patrol Prediction: Random movements are pre-generated and displayed 3 turns ahead in the UI, allowing players to plan around "random" behavior.

Resources (4 Core Systems)

1. CPU (Health/Life Force)

- **Range:** 0-60 CPU
- **Loss:** Combat damage only
- **Recovery:** Data Patches, killing enemies (+5 CPU per kill), CPU recovery nodes
- **Death:** 0 CPU = permanent death

2. Heat (Exploit Cooldown)

- **Range:** 0-100°C
- **Increase:** Using exploits generates heat
- **Decrease:** Passive cooling over time, cooling nodes
- **Limit:** Cannot use exploits at 100°C heat

3. RAM (Exploit Capacity)

- **Range:** 8/12 GB (loaded/total capacity)
- **Use:** Limits total exploits equipped simultaneously
- **Management:** Must choose which exploits to load for each node
- **Upgrade:** Find RAM modules to increase capacity

4. Detection Level

- **Range:** 0-100%
- **Increase:** Being seen, killing enemies, time passage
- **Decrease:** Data Cleansers (rare items)
- **Critical:** Admin Avatar spawns at network-specific threshold

---

Combat & Exploits

Combat Types

Stealth Strike: Attack unaware enemy for 2x damage + silence **Direct Combat:** Standard damage, always creates noise **Escape:** Break line of sight to return to stealth

Targeting System

All ranged exploits use **line-of-sight targeting**:

- Click/select target within range
- Line-of-sight calculated through walls and obstacles
- Visual indicator shows valid targets
- Walls and obstacles block targeting just like vision

Exploit Categories (4 Groups)

Stealth Exploits

1. **Shadow Step** (2GB RAM, +20°C, Range: 8) - Teleport between shadow zones

2. **Data Mimic** (1GB RAM, +15°C, Range: Self) - Appear as harmless data for 5 turns
3. **Noise Maker** (1GB RAM, +10°C, Range: 6) - Create distraction at target location

Combat Exploits

4. **Buffer Overflow** (2GB RAM, +25°C, Range: Adjacent) - High melee damage, armor piercing
5. **Code Injection** (1GB RAM, +15°C, Range: 4) - Ranged attack, bypasses firewalls
6. **System Crash** (3GB RAM, +35°C, Range: 3 radius) - Area damage, disables multiple enemies

Utility Exploits

7. **Network Scan** (1GB RAM, +10°C, Range: 8) - Reveals enemy positions and patrol routes
8. **Log Wiper** (1GB RAM, +5°C, Range: Self) - Reduces detection level significantly

Emergency Exploits

9. **EMP Burst** (3GB RAM, +40°C, Range: 2 radius) - Disables all nearby enemies temporarily

RAM Management: Players can choose which exploits to load for each node, allowing tactical adaptation to different scenarios.

Enemies (6 Types)

Basic Enemies

1. **Scanner (s)** - CPU: 20, Static guard, 2-square vision
2. **Patrol (p)** - CPU: 25, Linear movement, 3-square vision
3. **Bot (b)** - CPU: 15, Random movement, 2-square vision

Advanced Enemies

4. **Firewall (F)** - CPU: 40, Static barrier with 1-square vision, reduces damage by 50%. Functions as an "intelligent barrier" - doesn't move but watches a specific chokepoint with very short range vision.
5. **Hunter (H)** - CPU: 35, Seeks disturbances, 5-square vision
6. **Admin Avatar (A)** - CPU: 100, Perfect tracking, 6-square vision, spawns at high detection

Firewall Note: Functions as an "intelligent barrier" - doesn't move but watches a specific chokepoint with very short range vision.

Items (Single System)

Data Patches (Randomized Each Run)

Six colors with random effects each playthrough:

- **Crimson, Azure, Emerald, Golden, Violet, Silver**

Possible effects:

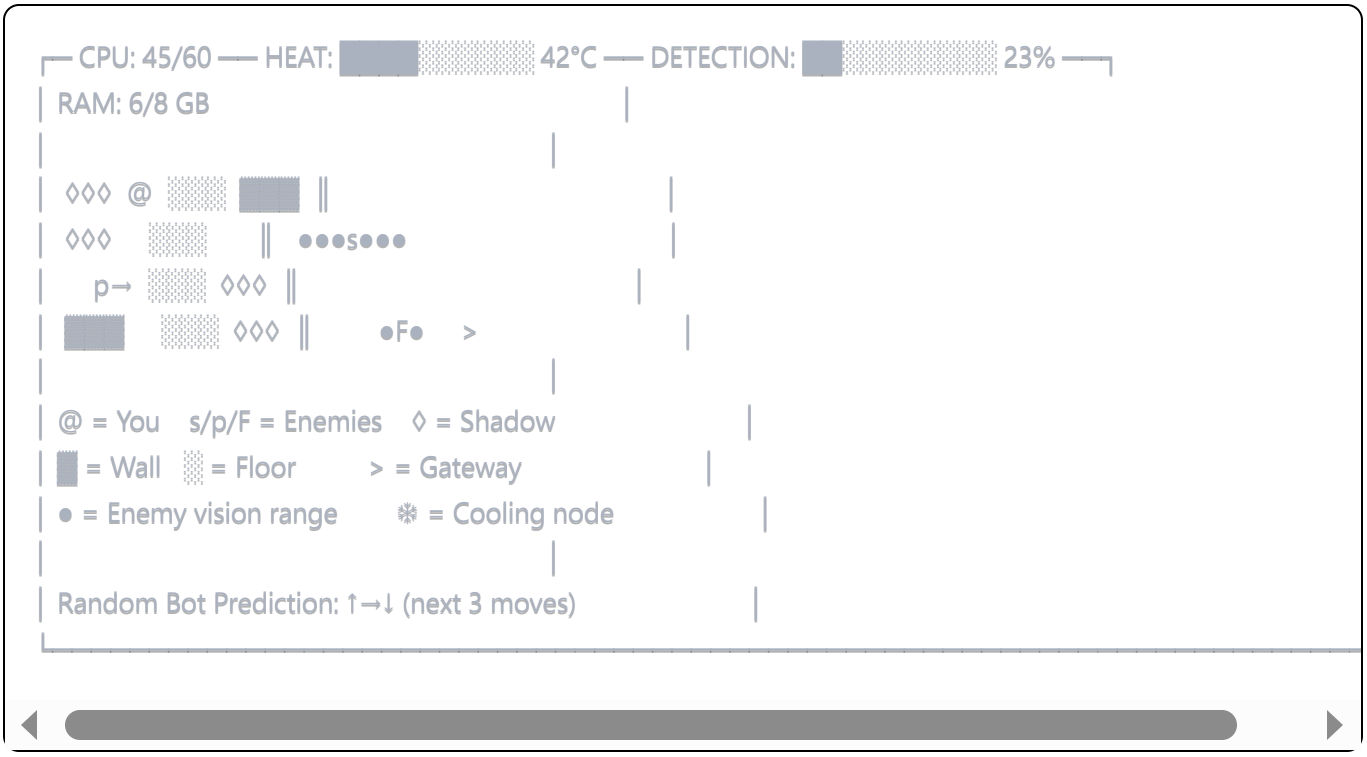
1. Restore 30-40 CPU
2. Reduce heat by 40°C instantly
3. -25% detection level
4. Temporary speed boost (50% faster movement for 10 turns)
5. Enhanced vision (see through 1 layer of walls for 15 turns)
6. Exploit efficiency (50% less heat generation for 8 turns)

Identification: Unknown until used, then learned for entire run

---

User Interface

Always Visible



Context Information (Auto-Show)

- **Enemy vision ranges:** Always visible when enemy is in player's sight
- **Shadow zones:** Only when adjacent

- **Patrol routes:** Press Tab to toggle
- **Detection warnings:** Only when rising quickly
- **Heat warnings:** Only when approaching 75°C

Visual Language

Core Symbols (6 Total):

- [@] Player
- [s/p/F/H/A] Enemies (single character each, variable vision ranges)
- [◊] Shadow zones
- [▒] Walls
- [>] Gateway
- [•] Enemy vision range (circular display)

Color Coding:

- **Red:** Immediate danger (spotted, high detection, overheating)
- **Yellow:** Caution (rising detection, enemy alert, moderate heat)
- **Green:** Safety/opportunity (shadows, unaware enemies, cooling)
- **White:** Neutral (walls, floors, basic info)

Technical Implementation

Engine: Python + tcod

- **Core:** tcod library for roguelike functionality
- **Graphics:** 64x64 pixel sprites OR ASCII (no hybrid mode)
- **Audio:** Chiptune retro music tracks and simple sound effects
- **Save System:** JSON-based for configuration and progress

Rendering Modes

ASCII Mode: Traditional text display with full feature support **Graphics Mode:** 64x64 pixel sprite rendering with identical gameplay

No Hybrid Mode: Game operates in pure ASCII or pure graphics - no mixing of rendering styles within a single session.

Tutorial Integration (Dynamic Length)

Tutorial Network (Level 0) - Fixed Design, First Play Only

Phase 1: Movement and basic stealth

- Learn grid movement in nodes
- Discover shadow zones
- Understand enemy vision ranges (always visible)

Phase 2: Patrol observation and prediction

- Watch enemy movement patterns
- Learn random patrol prediction system
- Practice timing movement through connections

Phase 3: Detection system and CPU recovery

- Experience detection building over time
- Learn CPU recovery through enemy kills (+5 CPU each)
- Find and use CPU recovery nodes
- Discover cooling nodes for heat management

Phase 4: Heat and exploit management

- Introduction to exploit system with ranges and targeting
- Heat generation and cooling mechanics
- RAM limitations and per-node loadout choices

Phase 5: Items and advanced mechanics

- Find and identify data patches
- Learn temporary effect system
- Practice stealth strikes vs direct combat
- Understand Admin Avatar spawn mechanics

No Fixed Turn Limit: Tutorial progresses based on player understanding, with detection building naturally to create urgency and teach timing.

Design Philosophy

Core Principles

1. **Clarity Over Complexity:** Every system serves the stealth experience
2. **Consistent Language:** Pure cyberpunk terminology throughout (Node/Connection/Gateway)
3. **Progressive Mastery:** Simple rules, deep tactical possibilities
4. **Immediate Feedback:** Clear cause-and-effect for all actions
5. **Focused Experience:** Everything supports stealth-first gameplay

Resource Management Philosophy

- **CPU:** Your life force - precious and limited
- **Heat:** Tactical pacing - forces exploit timing decisions
- **RAM:** Strategic planning - choose your tools for each node as appropriate
- **Detection:** Escalating pressure - the network fights back

The game focuses on tense, tactical stealth gameplay where resource management creates meaningful decisions and the network environment feels like a living, reactive opponent.