



A simulation limited only by your imagination ...

- ❖ Smaller, better, faster;
- ❖ Powerful structure and language for describing a wide variety of real-world issues;
- ❖ Variable fidelity representation of physical and cognitive phenomena.

Simajin That!

Hardware

Operating Systems

- * Windows
- * Mac OS
- * UNIX, Linux

Run-time Capabilities

- * Real-time or user-specified run-time multiple
- * Standalone or networked
- * Displays: terrain, hydrography, boundaries, roads, railroads, icons, images in 2-D or 3-D

Units

- * Balanced treatment of ground, air, naval, and space units
- * Generic functionality for units (Move, Sense, Talk, Affect, Work)
- * Tracks consumables (fuel, food, bullets, missiles, etc.) for units
- * Ability to create and customize units, organizations, command chains, sides, etc.
- * Capability to interrogate units to gain information
- * Units represented as hierarchy of components with data to describe their characteristics

Generic Functions

Affecting

- * Variable fidelity representation of weapons, their characteristics, and tactics for use, including persistent effects
- * Calculates collateral damage and partial battle damage to components
- * Interference with sensing and talking
- * Complete representation of logistics at whatever detail is necessary across whatever scope is required for ground, air, and naval units
- * Advanced techniques for influencing units (transmission of matter with intent of causing help or harm)

Talking

- * Explicit representation of talking, messages, signals, and all communication between units, including orders, intelligence, and sensing results

Moving

- * Variable fidelity: three to six degree of freedom movement
- * Capable of real-time user-controlled maneuvering for any unit
- * Threat avoidance, terrain following, terrain avoidance capabilities, both reactive (during the simulation) and pre-planned
- * Efficient and realistic path-finding algorithms for obstacle and threat avoidance

Sensing

- * Variable fidelity sensor representation (signal levels, antenna patterns, frequency, power, target dimensions, terrain masking) for acoustic and electromagnetic sensors
- * Sensing causes explicit perceptions of other units (real and imaginary) including possibility of misperceived locations, and imperfect knowledge about other units

Working (including Thinking)

- * Advanced representation of cognitive processes using a variety of techniques
- * Unit respond based on their perceptions, procedures, and circumstances
- * Emission control capability
- * Creation of developer or user defined tactics, maneuvers, contingency plans, and mental attitudes for units
- * Units act independently or as cohesive teams controlled by commanders
- * Working includes repairing, improving/building, determining priorities, processing information, personnel or materiel, or any task that takes time and demands some or all of workers' attention

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The logo for RhinoCorps features the word "Rhino" in a large, bold, maroon font, followed by a stylized black rhinoceros head icon, and the word "Corps" in a large, bold, black font.

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Capabilities

Environment

- ✧ Allows more realistic and imaginative layout of scenario
- ✧ Representation of terrain, lighting, and weather effects

Logistics

- ✧ Logistics in Simajin includes supply, transportation, maintenance, personnel operations, finance and accounting, and all other processes and functions that contribute to a complete description of an operation
- ✧ Components can be given costs (for replacement, fixing, or building) and cost rates such as salaries or operating and maintenance rates.
- ✧ Failures need not be perceived when they happen, and errors can occur during the repair or replacement process
- ✧ As many levels of maintenance can be defined as are needed
- ✧ Logistics can be affected by the battle; damage can occur to repair facilities or links in the transportation network

Command, Control, Coordination

- ✧ Units may or may not belong to command chains or sides, and there may be as many or as few as are needed
- ✧ Dynamic changes can occur in the relationships between units as the scenario unfolds

Interoperability

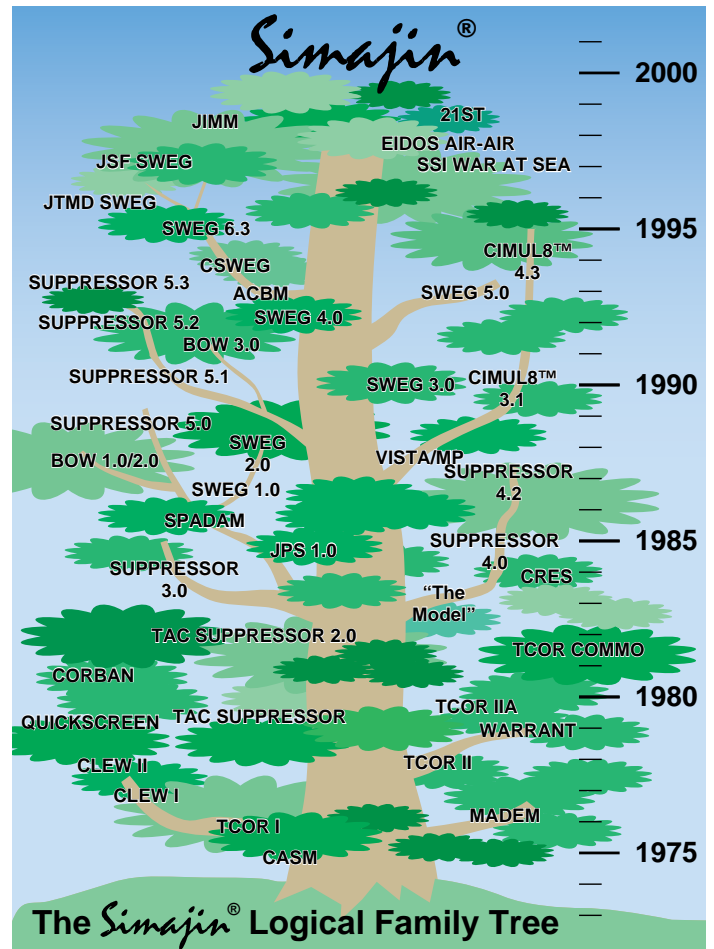
- ✧ All units can be represented with whatever communications and capabilities that they might possess

Multi-Modal Transportation

- ✧ Transportation, including logistics requirements, can use air, rail, road, naval, pipeline assets in whatever combination is needed
- ✧ Transportation nodes can be represented in whatever detail is needed, down to and including internal transportation activities and processing within a node
- ✧ Cost values can be ascribed to activities, customers, freight, etc. to examine economic repercussions of various alternatives

Cognition and Behavior

- ✧ Perceptions of reality for each unit are explicitly represented separate from reality
- ✧ Tactics, procedures, SOPs, doctrine, orders are part of the data, not hard-coded
- ✧ Units can be overwhelmed with data, make mistakes, etc.



The History of Simajin

Simajin is based on over twenty-five years of experience in developing computer simulations. The logical family tree, for which Simajin is the most advanced member, is shown in the picture above. The complete tree has many more branches than what is shown here.

Simajin and its predecessors have been used by the DoD, the DOT, other federal agencies, many different government contractors, and the commercial sector.

Simajin has a very broad applicability because it was not designed to meet a specific user problem. It can be applied to military or civilian issues. It can be used for traditional, standalone analyses, or for networked, real-time applications. It has been applied to highly detailed, short duration and less detailed, long duration scenarios.

If you can describe the details associated with your problem, then more than likely Simajin can be applied to it.