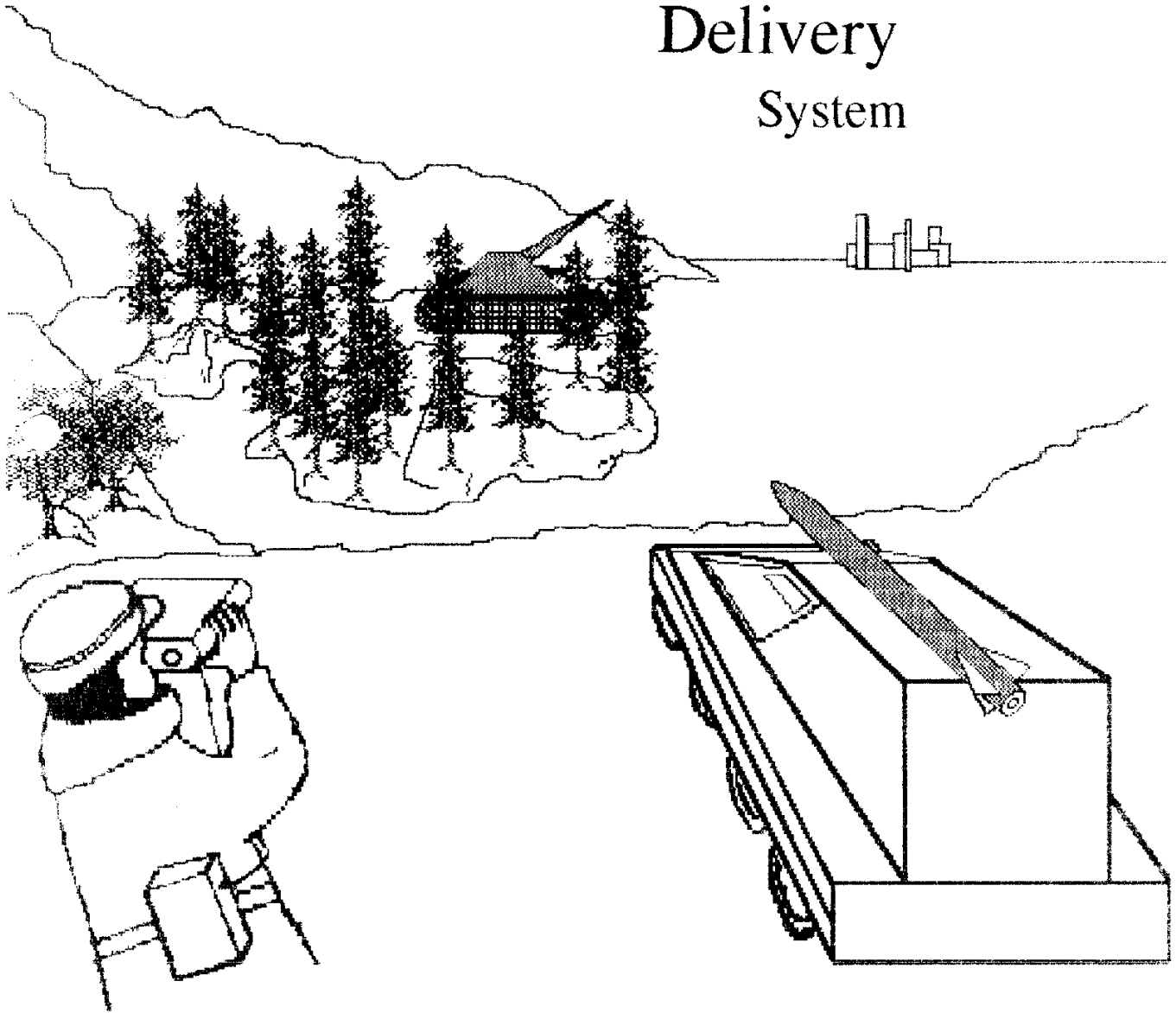


Phoenix Missile Delivery System



Strategy & proposal by:
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Phoenix Missile Delivery System

Background:

Traditionally, wars have been fought as a two part process: air strikes followed by ground troop involvement. In desert areas such as Iraq, this tactic usually has moderate success. But in areas of dense foliage such as Viet Nam or Europe, it's a different story.

In situations such as these, a first air strike and possibly a second will be successful; from there on, it's an uphill battle. As enemy forces adapt to the new threat, extensive use of camouflage nearly negates any further air effectiveness. It is at this point that extensive use of ground forces becomes necessary.

Any successful campaign must use a certain combination of a) troops and b) machines. These two elements can be combined in a simple equation:

$$\text{Force} = \text{troops} + \text{machines.}$$

In such an equation, it's easy to see that for a specific amount of force to successfully overcome the opposition, there must be a minimal mix of troops and machines. If you reduce the number of troops, the amount of machines must increase, and vice versa.

Given the fact that massive troop involvement is highly unfavorable, in both the U.S. and Europe, the only solution is to increase the use of mechanized forces. Considering the state of present military arsenals, we are forced to abandon that approach for lack of sufficient technological capability. Presently there is no system available which is capable of rendering well hidden targets inoperative without the use of large troop numbers that can maneuver in rough terrain.

New Technologies:

Consider for a moment a technology that utilizes a small number of recon patrols closely coupled with a modest number of small, fast, highly maneuverable missile carriers, working together to target and deliver a substantial payload with lightning speed and precision.

By today's standards, it would be impossible; this is where the Phoenix Missile Delivery System differs from the traditional. The traditional strategist may argue - "Why not simply use tanks and armored personnel carriers?" Tanks are expensive to build, maintain, and operate; they cannot maneuver in extremely rough, steep or heavily wooded terrain. Our system uses small, inexpensive carriers - at about a 30:1 ratio in terms of tank costs. This translates into enormous savings in initial setup and subsequent maintenance. Tests conducted with similar vehicles in the late '60s proved the superior maneuverability of our design over the traditional tank configuration.

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Another important factor to consider is firepower. Tanks, for the most part, use a traditional rifled cannon for horizontal delivery of dumb warheads. The Phoenix system uses a missile that can be instantly programmed with infinite trajectory characteristics. What this means in real terms is a rocket that can act like a field cannon, mortar, cruise missile, or like a death defying stunt flyer. In other words, the flight path is completely programmable on-the-fly.

Besides the missile carrying capability, the PMDS can be configured with any number and combination of dumb but effective firepower systems (106mm recoilless rifles, heavy mortars, attack helicopter missile packs, multiple heavy machine guns), matching or exceeding the firepower of the U.S. Army's best tanks.

Future refinements of the PMDS will result in the world's first multi-use missile; a unique combination of sensors and artificial intelligence will allow targeting of land, sea or air objectives using the same delivery system.

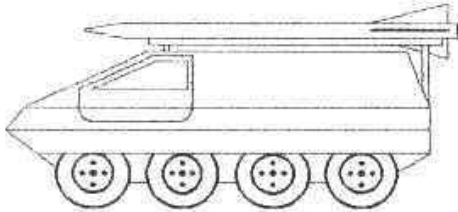
Cost Factor:

Quick time-to-market and low cost are inherent due to the use of off the shelf components; we make maximum use of pre-existing technologies and designs. Fast implementation resulting from the structure of our company. No cost overruns - we deliver on what we say.

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Phoenix Missile Delivery System Components

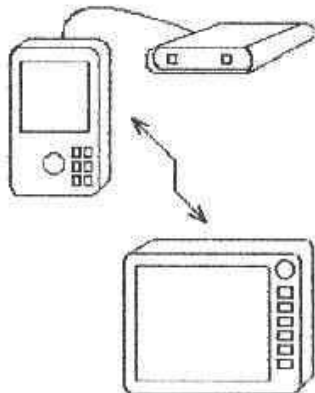
The Phoenix Missile Delivery System is a unique combination of tried and proven methods and new artificial intelligence techniques. The system consists of the following components:



Highly maneuverable missile carrier. Designed for two man operation. Optional bullet-resistant sidewalls. High payload carrying capacity. Can be retrofitted with conventional heavy firepower, or the latest high tech rocket systems.



Reprogrammable missile with unlimited trajectory characteristics. On-the-fly programming with new graphical interface means instantaneous retargeting. (Traditional missile trajectory, mortar trajectories, sawtooth and square wave trajectories.)

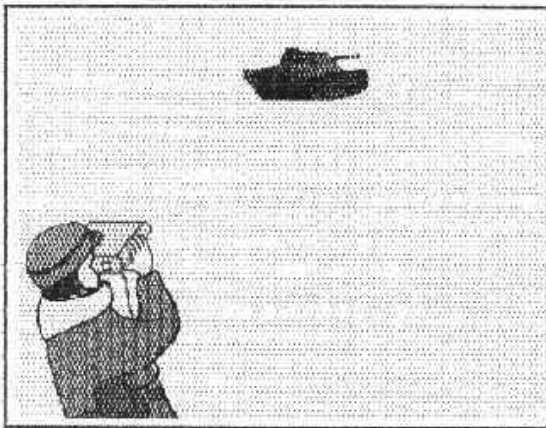


New closed loop targeting system allows instantaneous downloading of target data. User friendly interface and compact handheld design work together to provide the most effective targeting system in existence. Handheld unit used in the missile carrier is tied in with new missile electronics to utilize revolutionary sawtooth and square wave trajectory characteristics.

Handheld design means greater effectiveness from the briefing room to the battlefield.

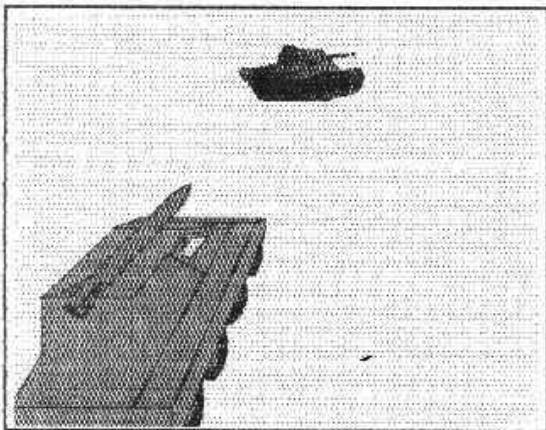
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In-field Use of the Phoenix Missile Delivery System

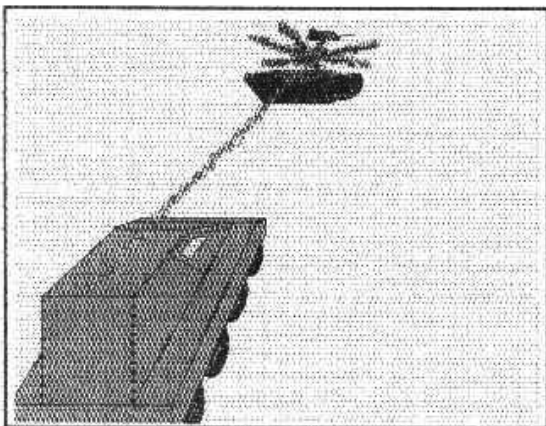


It's as easy as 1 - 2 - 3.

1. Recon is sent out to covertly identify and locate targets.



2. As soon as targets are located and positional data is downloaded, the carrier moves the missile (payload) into range.



3. Payload is delivered with precision and speed -- the target is eliminated.

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SBIR Solicitations
1992-93

* Following is a list of '92-'93 DoD and DARPA solicitations that the Phoenix Missile Delivery System directly addresses. The major requirements are satisfied by our design.

- A92-087 Electronic Map Display and Route Planner
- A92-147 Personal Navigation and Reporting
- A92-035 Non-Cooperative Combat Identification
- A92-065 Individual Combat Soldier Identification Technology
- A92-111 Miniature Display Device Technology
- DARPA 92-203 Tools for Rapid Mapping and Analysis of Local Transportation Networks

- A93-042 Position Location, Navigation and Fire Control Map Interface Unit
- A93-182 Soldier's Radio: Innovative Communications and Networking Technologies for the Individual Warrior
- A93-188 Spread Spectrum Technology for Communications on the Move
- A93-192 Soldier Identification (SID)
- A93-271 Improved Missile Guidance Simulator Target Position Control for Precision-Guided Weapons
- A93-346 Vehicle Position Location System
- A93-355 High-speed Vehicle Positioning and Reporting System
- DARPA 93-038 Security Protocol Design for Networks
- DARPA 93-065 Low-Cost Techniques to Prevent Enemy Use of Captured Personal Communication Equipment