Javelin in Afghanistan: The Effective Use of an Anti-Tank Weapon for Counter-Insurgency Operations

NDIA Joint Armaments Conference
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AAR Analysis of Javelin Use in OEF

The After Action Review (AAR) Material:
- AARs of Javelin use primarily in OEF, 2010-2011
- Across eight division or independent brigades
- Primarily small-unit personnel: Gunners; Team, Squad, and Platoon Leaders
- Infantry (Light, Heavy, Airborne, Air Assault), Cavalry, Marines
- 13 Hours of interview video, 311 pages of additional interview transcripts and summaries,
- 261 interviewees and an additional 66 Responses to a Structured Survey,

Analytic Challenge:
- Surveys are statistically valid but with limited insight.
- Interviews were insightful, but not statistically valid.

Analysis Methodology:
- Identified major bottom-up themes
- Rated every comment in every interview against the 21 major bottom-up themes
- Evaluated each theme for consistency with every comment
- Evolved themes into findings using consistency and number of relevant comments
- Evaluated findings in the context of survey results

“This hybrid methodology produced findings that were more insightful than survey results, and more statistically valid than individual interview comments.

“It is a really simple system, I absolutely fell in love with that thing. Really simple and very effective.”
- Master Javelin Gunner (fired 20 Javelins)
Finding 1.1: ROE Friendliness

ROE Friendliness: There is a widespread misperception that the Javelin System is not ROE-Friendly, due to likely collateral damage. This misperception fades as gunners and leaders learn more about system capabilities.

"Immediately people just perceive it as something that is going to cause mass damage. And, as we use them we realize that it’s obviously very precise, and it doesn’t cause a whole ton of damage. ... If I had known their capabilities, like I know them now, I would definitely have pushed to use them early on."

Our Most Powerful Finding:

Strength of Finding:

L1: Clear, Unambiguous, Common

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The Hybrid Approach is Superior

Here's a case where the survey led us astray, and the interviews set us straight:

**Overwatch Bias:** Units strongly prefer to deploy the system for static surveillance or overwatch support of dismounted patrols, as opposed to carrying the system on patrol.

1. Establish Javelin Overwatch
2. Patrol (without Javelin)
3. Enemy Contact.

And here is the exact opposite case (surveys corrected interviews):

**Finding 3.3: System Reliability**

System Reliability: The Javelin system seems to be highly reliable when properly stored and maintained.

Survey Results:

| Did you hear of any support or maintenance issues with the Javelin, or did you encounter any? |
|-------------------------------|------------------|-----------------|
| **Yes** | **No** |
| 18 | 39 |

Survey Results:

<table>
<thead>
<tr>
<th>Was the Javelin CLU reliable?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yes</strong></td>
</tr>
<tr>
<td>56</td>
</tr>
</tbody>
</table>

**Strength of Finding:**

- **Comments:** 71
- **++** | **+** | **-** | **--** |
  - Clear, Unambiguous, Common
  - 19 | 43 | 9 | 0

**L3 Reasonable Inference:** The respondents discussed most of their Javelin failures in the interviews, but answered the surveys with respect to all firings.
Finding 1.4: Munitions Niche

Munitions Niche: The primary operational niche for the Javelin missile is when a unit needs immediate, precisely targeted effects at distances outside the capabilities of competing combat systems.

"(The Javelin) fills the gap. They got an 82 (mm recoilless rifle), and they like using it because they can be like, a frickin’ thousand meters away and hit almost every time, what they’re aiming at. It’s a very simple point, click heavy weapon that we have no answer to, except for the Javelin. You know what I mean?"
Finding 2.1: Target Types

Target Types: The Javelin warhead has relatively superior effects against fortified positions, caves, structures, and individuals with good locks, but is often less than ideal against multiple personnel.

<table>
<thead>
<tr>
<th>Target Type</th>
<th>Very Unlikely</th>
<th>Not Likely</th>
<th>Likely</th>
<th>Very Likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enemy in Cave</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Fortified Position w/ Hvy Wpn</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual Person, Direct Lock</td>
<td></td>
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<td></td>
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<tr>
<td>Multiple Personnel, Direct Lock</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Multiple Personnel, Proxy Lock</td>
<td></td>
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</tbody>
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Perceived Likelihood of Destruction

Strength of Finding:

<table>
<thead>
<tr>
<th>Comments</th>
<th>++</th>
<th>+</th>
<th>-</th>
<th>--</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>4</td>
<td>24</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

L1: Clear, Unambiguous, Common

“Once you get them backed into a cave, ... you can drop 120s right on top of these things, ... but these dudes will come out of that just fine, later on. So we found out that the Javelins, you could fire straight into the mouth of a cave, ...it would just blast out the inside of that cave. ... and it was perfect.”

“When that motor fires, there’s no mistaking it. ... they know it’s coming. And if they’re the ones shooting at us, they know exactly where it’s going, and they’ll run from that spot.”

In other words, the three insurgents, simulated below, would have fled upon hearing the Javelin launch, rather than continue emplacing IEDs.
Other Interesting Findings

Finding 1.3: Firefight Termination

Firefight Termination: The OEF enemy has learned to fear the Javelin, which is routinely described as having the ability to ‘shut down’ a firefight. The system also significantly extends the enemy stand-off range for firefight initiation.

Finding 2.4: Surveillance Niche

Surveillance Niche: The CLU is useful as a supplement to the superior LRAS and ITAS mounted surveillance systems, and is generally preferable to other man-portable systems for OP surveillance. Soldiers prefer the PAS-13 for patrols.
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QUESTIONS?