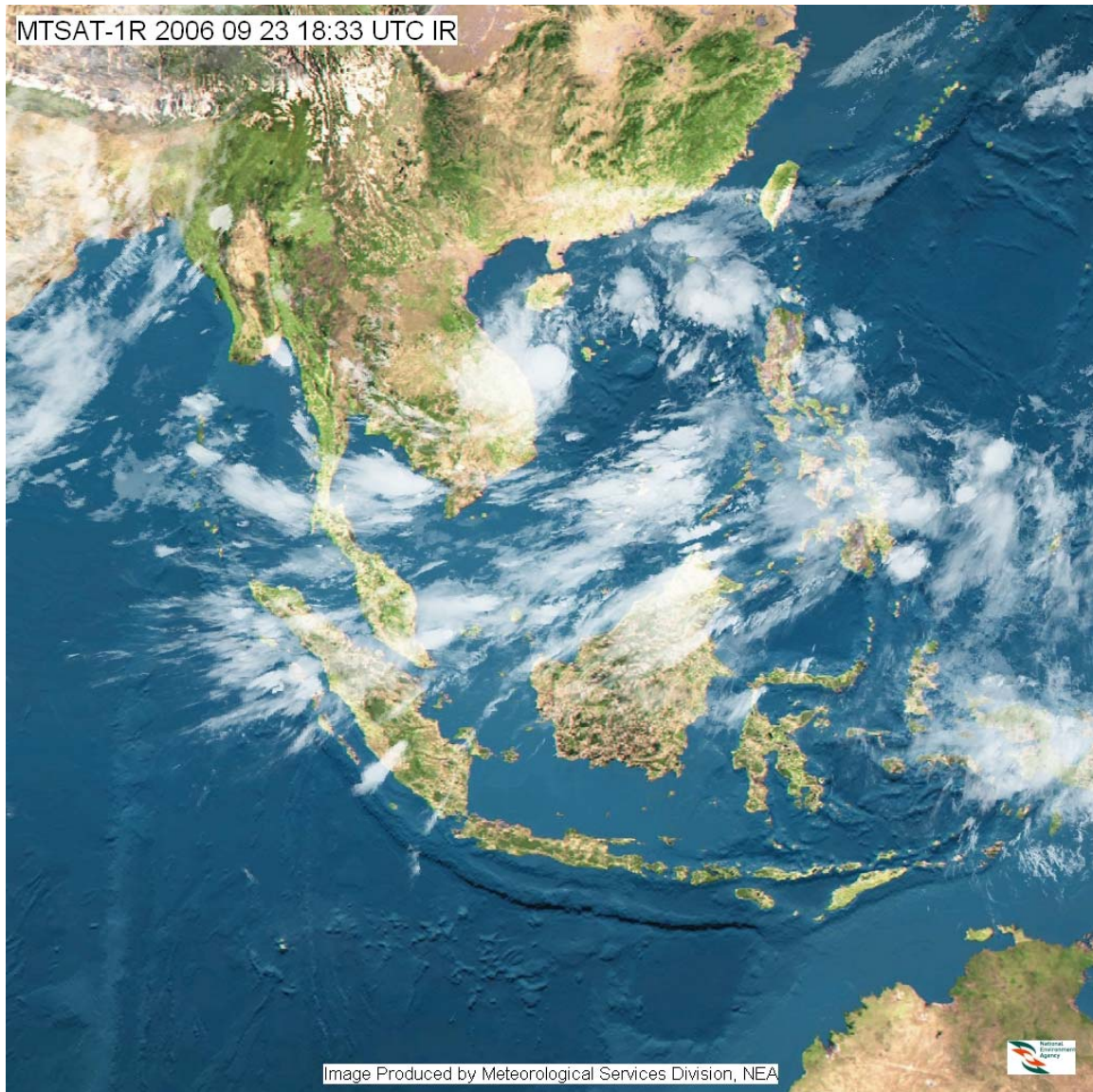


The Defense Industrial Base:
Issues to be Considered and
Recommendations

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The following scenario takes place six years into the future, 2011....

South China Sea: 0700 Zulu. 6 May, 2011

The US Seventh Fleet, led by the carrier *USS Kitty Hawk* (CV 63) has been deployed to send a strong message to China's totalitarian leadership, who are amassing troops, aircraft and vessels for what is a apparently a full scale assault against Taiwan in accordance with the provision of the 2005 Non-Secession laws. Laws specifically crafted to legally permit an invasion of this tiny nation.

Years of preparation for such an invasion make the US-backed Taiwanese military a formidable foe, and it won't be overrun easily. Nevertheless, competence in matters military and strength of will cannot withstand parity in capability and equal strength of will plus overwhelming numerical superiority within the People's Liberation Army (PLA), Air Force (PLAAF) Navy (PLAN) and its air arm (PLANAF).

This disturbing reality is the basis of a foregone conclusion among US DoD planners that Taiwan's fall is not a matter of if, but when. Which is exactly why the fleet was deployed the moment satellite ground imagery, growing communications traffic and human intelligence determined an attack against Taiwan was inevitable.

Force Modernization

In 2005, Defense Analyst Giuseppe Anzera, outlined his view of a Chinese Navy in technological transition: *“Chinese shipyards have already completed two 052C-class ships, which are expected to be commissioned in 2005. It is probable that P.L.A.N. intends to bring at least six ships of this class into service, deploying them in the three main operative battle groups that form the bulk of Beijing's fleet. This strengthening of forces will constitute a notable improvement in the performance of China's high sea forces. The 052C-class warship is equipped with an air defense system based on a sensor apparently similar to the Aegis device and equipped with an HQ9 surface-to-air missile (SAM), considered a long-range vertically launched missile with a 90 km range (56 miles).*

”The HQ9 will be installed in eight vertical launch system revolver-like stations (six forward, two aft), each with six missiles. Destroyers of this class will also have the capability to conduct long-range surface war missions using two kinds of surface-to-surface missiles (SSMs): the HN3 (a modern cruise missile with a range of 2500 km (1553 miles) capable of delivering a conventional or nuclear warhead) and the YJ12 (a supersonic missile with a range of 200 km (124 miles)). Also, if air defense will be the main duty of 052C-class ships, the presence of a variable depth sonar array

is expected to give them good anti-submarine warfare performance.

Deployment of this class is proceeding in parallel with the construction and acquisition of a number of new surface and submarine vessels. This emerging situation can suggest some foreign policy scenarios related to Beijing's moves in the next years.

In regard to China's surface fleet (presently consisting of 64 large combatant units: 21 destroyers and 43 frigates), for the next decade Beijing will be committed to the demanding process of replacing obsolete ships, which had for so long reduced the Chinese Navy to a mere coastal fleet, with more modern units. For this reason, P.L.A.N. continues to bring into service units of Russian Sovremenny-class destroyers, while pursuing the construction of 052B and 052C-class warships, in addition to the construction of a completely new ship, being built in China's Dalian shipyard, that is expected to be very large and loaded with heavy surface armament (probably similar to Russia's Slava-class cruisers).

“At the moment, the creation of an extensive ship-borne air force by building and deploying aircraft carriers does not seem to have priority in China. Beijing appears more interested in gaining time studying foreign equipment (as in the case of the aircraft carrier Varyag, a former Soviet carrier initially acquired from Ukraine, which is badly deteriorated and only 70 percent completed in terms of becoming militarily operational) and then proceeding, in the future and without particular haste, to build its first domestically-built aircraft carrier.”

The US naval, air and ground force commanders have every reason to be confident in a successful outcome against a quite modernized Chinese force led by the 80,500 ton Yalu-class carrier *Zhu Ronghi*. This force will soon include a Nimitz-class carrier of 101,000 ton displacement built under the direction of both Russian and French maritime architects and engineers, and is expected to deploy a full year in advance of the new CVN-78 class super-carriers scheduled for 2014, whose presence rendered moot the argument of several defense analysts that the Chinese were not interested in near-term development of a blue water force capable of slugging it out with powerful US surface fleets deployed globally. The force also includes enhanced Sovremenny-class Destroyers equipped with new carrier killing ship to ship

missiles, super-quiet Victor III-based nuclear-powered and very quiet Kilo-class diesel-electric submarines, and 60-knot Hydrofoil and Catamaran Littoral Combat Vessels, all equipped with now supersonic rocket torpedoes. The US navy, recognizing the powerful threat represented by these Russian-developed weapon systems in 2005, had worked for the past six years developing countermeasures, but even now, in 2011, the current generation weapon called *Shkval* (Squall) is tough to defeat.

In a surprising twist, help to counter this threat came from none other than Vladimir Putin himself, who realized in 2007 along with everyone else in the Russian government and military, that their prolonged and profound technological and tactical assistance programs to Chinese weapons development had put Russia at risk. The years of joint exercises and the comfort level felt, at least by the Russians, relative to ideological commonality, was nothing more than a means to a very large end by the Chinese. Indeed, the otherwise distrustful Russians had forgotten a signature Sun Tzu-ism: “*Know yourself and know your enemy*”.

In short, they had been used. Consequently, Putin ordered the immediate development of *Shkval* countermeasures, and to allow the Americans and other NATO partners (Russia and the Ukraine became de facto NATO members in 2008) access to the technology. The solution came in the form of a submerged and surface launched anti-rocket torpedo, which was aimed and launched completely independent of human interaction in a manner consistent with the Phalanx close-in anti-missile guns deployed by the fleet. The Russian system is integrated into a common platform with the SSTDS torpedo defense system and AN/SLQ-28 NixieAS (anti-Shkval) torpedo countermeasures system, from Sensytech Inc of Newington, Virginia.

The AN/SLQ-28 is deployed on all combat ships of the Seventh Fleet with the exception of the mine countermeasures, landing dock and submarine tenders. It works in concert with the Raytheon AN/SLQ-35 (V) electronic warfare system which detects hostile radar emissions by two sets of antennae

and the system analyses the pulse repetition rate, the scan mode, the scan period, and the frequency. The system identifies the threat and direction, produces a warning signal and interfaces with the ship's countermeasures systems, inclusive of the superb RIM-161(B) Aegis Ballistic Missile Defense (BMD) utilizing the exo-atmospheric Raytheon SM-3 (Standard Missile) capable of short and medium range missile and ICBM intercepts outside of the earth's atmosphere.

In 2004, according to reports, Russia, with Putin's approval, had offered to sell the Taiwanese, through the US, Kilo-class submarines with the ability to launch the quite lethal *Sunburn* and *Yakhont* anti-ship missiles in addition to *Shkval* rocket torpedoes. This of course, was a very direct means for Taiwan to counter the threat of the Kilos of the same weapons capacity already in China's PLAN inventory.

There is no indication the deal was consummated.

In the skies, US naval and air force aviators can expect to encounter the Sukhoi SU-27-derived Jiang F-11 and the brand new Shenyang F-12 fighter aircraft designed to be operationally paired in a manner not dissimilar to the General Dynamics F-16 and the Boeing/McDonnell-Douglas F-15. The F-12, similar in appearance to the F-22 *Raptor* and designed as an air superiority fighter melding technology –including an internal weapons bay and stealth -- and tactics learned from interaction with Russian, Israeli, French and US aerospace sector contacts both overt and covert, is said to be able to defeat the US Navy's and Marine Corps F/A-18 *Super Hornet*, the USAF's F-15, F-16 and effectively contend with F-22 and F-35 *Lightning II*. Force commanders are expecting initial engagement with fifth generation indigenously produced Xian Jian Hong *Flying Leopard* JH-7 fighter-bombers equipped with M variant YJ82(M) anti-ship missiles.

USAF B-2 *Spirit* stealth bombers newly modified to carry extra-long range (2500 nm) anti-ship and hardened target destroying cruise missiles, have been deployed from the reactivated Wurtsmith AFB in Oscoda, Michigan, to support the Seventh Fleet operations in the event the South China Sea engagement moves rapidly out of theater as a result of China going on full war footing. It is hoped they will serve as a deterrent to this very real possibility.

B1-B *Lancers* operating out of Ramstein and establishing in-theater homes temporarily at bases in South Korea, Japan and Taiwan, are in flight equipped with Boeing AGM-84J *Harpoon Block III* anti-ship missiles. They have one mission: Take out the *Zhu Ronghi* should fleet saber rattling become active combat.

If the Americans, backed logistically by several NATO allies, only knew that the battle was lost before it ever began in this near future scenario; and the Chinese do it with minimal expenditure of ordnance...



Xian Jian Hong JH-7 with YJ82K Anti-Ship missiles

The Battle Begins

Radar Contact: Chinese Battle Group
0724 Zulu 6 May 2011

The Seventh Fleet Battle Group, led by the carrier *USS Kitty Hawk*, completely retrofitted in 2010 and the theater level force command and control ship *USS Blue Ridge*, is supported by a strong mix of Ticonderoga and Oliver Hazard Perry-class Aegis guided missile Cruisers including *USS Shiloh*, *USS Chancellorsville* and *USS Rumsfeld*; Arleigh Burke-class guided missile destroyers like *USS Curtis Wilbur*; The Amphibious Assault ship *USS Essex* carrying Advanced Amphibious Assault vehicles whose mission is to assault and temporarily neutralize the Hainan Island military base threat; the Avenger-class mine countermeasures ship *USS Guardian* and *USS Angel*; Los Angeles-class attack submarines *USS City of Corpus Cristi*, *Detroit* and *Houston*, and the brand new Littoral Combat ships *USS Freedom*, *Paul Revere* and *Security*. The latter vessels specifically designed and on station to contend with the PLAN's newly deployed Dragon-class Hydrofoils and Lao Tzu-class catamarans.

The battle strategy is one of total containment of the Chinese PLA, PLAN, PLANAF and PLAAF on sea, in air and on ground.

The Chinese Second Fleet Battle Group led by the Yalu- class 80,500 ton carrier *Zhu Ronghi*, completed in 2009 as the first indigenously completed carrier (based on the Ukrainian 67,500 ton Kuznetsov-class carrier *Varyag* acquired and retrofitted in 2007) and by most assessments the equal of the *Kitty Hawk* in speed, crew complement, attack/defense technological capability and aircraft capacity (which happens to include the SU-30 MKK3, Yak-141 VTOL-inspired AV8 Harrier-type J-13 supersonic jump jet, naval variant J-12s, anti-submarine helos and advanced turbo-prop Airborne Early Warning (AEW) craft with eerie resemblances to the E-2C *Hawkeye* complemented by land-based Y-8 Surveillance and Electronic Warfare and KJ-2000 AWACS aircraft. It is supported by a similar strong mix of 052B and 052C-class guided missile destroyers utilizing a clone of the Aegis detection system (acquired through a US front company who managed to become a subcontractor to Lockheed-Martin) and anti-submarine variable depth sonar, three new Russian Slava-class derived guided missile cruisers built at the Dalian shipyards as was *Ronghi*, and very high speed Hydrofoil and catamaran configuration Littoral Combat ships.

Most worrisome to American commanders is that the Chinese carrier, cruisers and destroyers are equipped with the positively lethal, virtually indefensible Russian Raduga Machine Building Design Bureau 3M-82 Moskit *Sunburn* mach 2.5 and the near mach 3 NPO Mashinostroyeniya – P-800 *Yakhonts* anti-ship missiles. And, when introduced in 2001, were and are considered the most advanced cruise missiles in the world. The Navy also knew then that the *Sunburn* and *Yakhont* was designed to defeat both the Aegis anti-missile system and the *Phalanx* close-in point defense weapon through their ability to perform violent last second countermeasures lock avoidance maneuvers, typically designated rolling action. Consequently, there was immediate incentive to accelerate development and deployment of the RAM (Rolling Action Missile) defense system; yet unproven in combat.



The Ukrainian Kuznetsov-class Carrier Varyag; undergoing restoration at Dahlian shipyards for projected operational readiness in 2007

With 75 miles of open sea now separating the opposing fleets, all hopes of a peaceful resolution are dashed as 12 JH-7s are picked up closing on the American fleet at high subsonic speed and 4,000 ft altitude. They are known to be equipped with the YJ82M anti-ship missiles with minimum 65-mile range.

F/A-18E/F *Super Hornets*, having replaced the F-14 Tomcat as the main fleet defense fighter after its retirement in 2006 and now joined by F-35 *Lightning IIs*, immediately engage the JH-7s before they reach minimum release point range and down five aircraft in short order. The Aegis 9.0 equipped Destroyers *Cowpens* and *Curtis Wilbur* bring down another five, while the remaining two aircraft launch a spread of eight missiles. Yellow fireballs in the sky seconds after launch are all that are left of the aircraft.

Now, the fleet must deal with 8 missiles tracking both *Kitty Hawk* and *Blue Ridge*.

Cowpens takes on and out 4 Aegis tracked YJ82Ms while *Shiloh* destroys another 2. *Kitty Hawk's* Phalanx 30mm close-in ship defense weapons featuring depleted uranium rounds and Battlespace Adaptive Artificial Intelligence (BAAI, commonly known as “BAA-BAA tech”), must deal with the last two, and they do.

One destroyer commander mentally notes that the JH-7s have all but sacrificed themselves in this fleet attack. “It’s like Torpedo Squadron 8 at the Battle of Midway” he thought.

He couldn’t have known, and as would be revealed in the next 18 minutes, how correct an analogy that was....

American Fleet Response to Chinese Attack; Ground Forces

0745 Zulu 6 May 2011

The American Fleet, having successfully fended off the Chinese air attack, is now preparing their own. By all analyses, the superior training of US naval, air and ground forces -- the latter having already been deployed at strategic access points along the Chinese shoreline and borders via Amphibious Attack Vessels, and Boeing C17C *Globemaster IIIs* at forward areas – was expected to carry the day.

In parallel with the air and naval operations, fast and agile, well positioned, Rapid Deployment Forces consisting of US Army and Marine Special Forces were supported by Bradley and Stryker armored fighting vehicles with advanced target acquisition and engagement systems in addition to newly developed reactive armor and anti-tank missile countermeasures. The lessons learned in Iraq during intense counter-insurgency operations resulted in a DoD directive to BAE Systems to launch an accelerated program to ensure prolonged survivability of the Bradley – and concomitantly, the Stryker – in high threat arenas.

They had specific instructions to secure and neutralize key Chinese installations, military and infrastructural, Hainan Island in this case, via a

fast attack strategy dictating they spend no more time in the target area than was absolutely necessary: They had no intention of taking on the full might of the Chinese ground forces with their overwhelming numerical superiority in both men and equipment. Not to mention the technology gap in weapons had been reduced significantly over the last two decades.

Nevertheless, network-centric warfare had absolutely come into its own with comprehensive real-time data linking and program actuation between US forces deployed, all taking advantage of SATNET (Satellite Internet) an expansion of VoIP (Voice Over Internet Protocol) telecommunications. As crowded as low earth orbital spaceways had been in 2006, it was even more so in 2011, with a complex array of communications, GPS and terrestrial surveillance satellites from several nations. Ominously, even the “bad actor” nations like Iran, North Korea, and now, thanks to China’s aggressive space program, even Cuba and Venezuela had eyes in the sky.

In short order, this system would prove itself a companion to a rather significant Achilles heel of American forces.

As the force commander on *Kitty Hawk* gave the order to counter-attack, a coordinated anti-ship missile launch involving the B1-Bs, F/A-18s, F-35s, cruisers, destroyers and submarines based on Aegis ANL-SLQ-35 and airborne E-2D *Hawkeye* AEW and Japan Self Defense Force (JSDF) E-767 AWACS aircraft target acquisition, tracking and firing solutions data was seconds away.

That attack never materialized, when, as if by magic, radar screens went blank, Aegis real-time/symbiotic detection and attack electronics suite missile launch data disappeared from ship and system linked aircraft. The instant reality was that information flow had simply ceased to exist, and worse, all defensive/offensive capabilities, much of it Aegis-based, were neutralized.

A scenario of chaos and confusion rapidly emerged for the Seventh Fleet and all support forces that might as well have been torn from the pages of a

science fiction novel. Ship commanders suddenly found themselves unable to control their vessels as new commands, source unknown, were fed into GPS-based navigation systems.

When *Shiloh* realized it was on a collision course with *Cowpens* at 32 knots, IT officers and other shipboard computer/telecommunications specialists tried vainly to disable the system and invoke manual override. They were unsuccessful. The *Shiloh* ripped *Cowpens* in two and simultaneously tore a gaping hole in its bow permitting tons of water to fill its innards.

Both ships sank in minutes.

Officers and technicians aboard the command and control vessel *Blue Ridge* were astonished to see firing solutions developed from combined Aegis, AWACs and other offensive/defensive weapons and countermeasures systems data appearing on screen and being simultaneously uplinked to all ships, submarines and aircraft.

The problem was *the new targets were all American.*

USS Stethem, another guided missile destroyer, had locked onto the frigate *USS Gary* and launched two *Harpoon Block III* supersonic anti-ship missiles at virtually point blank, though sufficient for arming, range. *Gary* never had a chance and disappears in a blinding flash and boiling sea.

In the skies overhead, 15 F-22 *Raptor* pilots approaching the battle arena at 47,000 ft in supercruise, (Mach 1.5) were up to this point confident that their skyspace was incontestable even as long range radar reveals up to 36 PLAAF and PLANAF aircraft, a mix of the new F-12s and SU-30MKK3s. Suddenly, they find they are unable to advance or reduce throttle settings, utilize RADAR or arm weapons. Moreover, it appears the enemy aircraft have no problem tracking them.

The fact is, not only are they sitting ducks, but they have no control over their aircraft. In what seemed a slow, yet awful ballet, one Raptor after another either plunges into the sea or ground at supersonic speed, pilots unable to eject, or are blown out of the sky by Chinese air to air missiles.

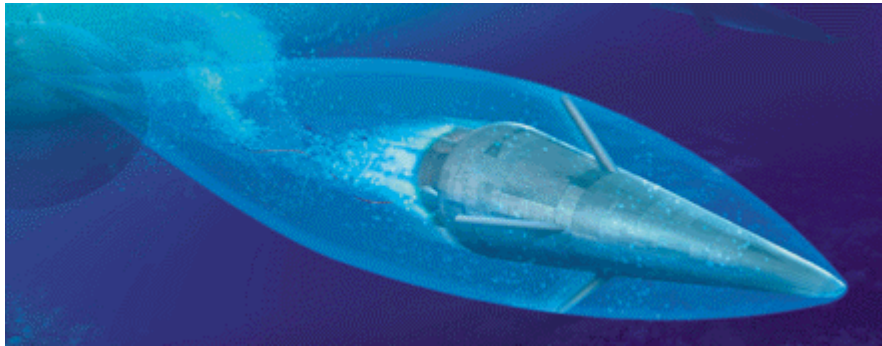
The F-35B *Lightning IIs*, having launched from the *Kitty Hawk* in their first offensive deployment after handover to the Navy in January 2011, aren't faring any better as the pilots vainly try to bring vectored thrust nozzles gone astray under some semblance of control. The aircraft are thus subjected to extreme .g super-maneuverability and experience structural failure mid-air.

The undersea situation is every bit as dire as the Captains of *City of Corpus Christi*, *Detroit* and *Houston*, aware of the carnage on the surface, try to prevent launches of *Tomahawk II* cruise missiles reprogrammed to strike Taipei and Sasebo Naval Base, Japan, home of the Seventh Fleet, as well as Raytheon MK52 very high speed (150kt) torpedoes launched against themselves. At the same time, weapons systems specialists and computer programmers are trying to stop the alien data feeds while attempting to restore some sensory capability. They need to know *now* where they are, how fast, how deep and if they're being tracked.

It is indeed the nightmare of nightmares for submariners, and unfortunately for *Houston*, *City of Corpus Christi* cannot prevent a torpedo launch which immediately acquires and attacks her with devastating results at 450 ft depth. *Houston* breaks apart and her death is heard with horrific clarity by the crews of her sister subs.

City of Corpus Christi and *Detroit* will live to fight another day, but only because in desperation, her telecommunications and computer technicians have decided to do the equivalent of a system wide data wipe and then de-energized all systems; switching over to redundant, though minimal, control and sensing.

On the surface, as bad as it is, the worst is yet to come as the remaining ships of the Seventh Fleet, with no offensive/defensive capability other than manual control *Phalanx* and primary guns of the littoral combat ships and frigates, can only watch in stunned silence as the skies become filled with *Sunburn* and *Yakhont* anti-ship missiles launched at 50 miles distance by the Chinese Second Fleet, and the waters of the South China Sea are infested with odd looking wakes generated by surface and submarine launched long range VA-111C *Shkval* rocket torpedoes.



Gas plasma envelope permitting near zero friction operation of Shkval supercavitating rocket torpedo

Kitty Hawk is hit by no less than six *Yakhont* nuclear tipped missiles and simply disintegrates; *Blue Ridge* has no time to contemplate the destruction of the carrier as she takes a hit amidships by a *Sunburn* with 750lb warhead, which tears a hole large enough to ensure her demise. In what is most certainly overkill, two rocket torpedoes hit her at supersonic speed, lifting her out of the water and simultaneously breaking the ship apart. The two pieces settle and sink with appalling rapidity. Only those crew blown over the side during the missile and torpedo strikes survive.

Aftermath

0803 Zulu 6 May 2011

Nothing remains of the surface Seventh Fleet save for the Littoral Combat Ships *Freedom*, *Paul Revere* and *Security*, whose 50kt capability and quick thinking technicians restored a measure of ship control and promptly took them out of the immediate battlespace. All aircraft, save for the B-2s who were ordered to turn away from the battlespace by *Blue Ridge* when it became apparent that something had gone terribly wrong, have been destroyed either through control loss or Chinese air-to-air and surface-to-air missiles.

The land forces dispatched to secure installations on Hainan Island have been annihilated; their positions electronically compromised. 16 Bradley and Stryker fighting vehicles with their Marine and Special Forces complement, delivered to Meilan Airport via C-17Cs in a daring raid launched from a Taiwanese airbase on the island of Taiping (completed in 2006 in the continuously disputed Spratlys), and the Advanced Amphibious Assault vehicles (now known as Expeditionary Force Vehicle or EFV) launched from the *Essex*, were mysteriously immobilized. They had no chance against the strong force of Chinese WZ-11 attack helicopters, Type 97B Infantry Fighting Vehicles and Type 100A main battle tanks.

Moreover, the AAV mother ship *Essex* was hit by four rocket torpedoes, and seconds later, by a nuclear tipped *Yakhonts* missile. In an instant, only debris and smoke were left where a ship had been. There were no survivors.

Future military historians would rank this US naval force defeat – in terms of upset – right along with the Battle of Tsushima/Port Arthur during the Russo-Japanese War in 1905. Japanese forces, led by Admiral Togo, utterly defeated a numerically and technologically superior Russian battle group led by Admiral Rodzesvensky.

It immediately changed the world's balance of power, with Japan emerging as a military and geo-political force to be reckoned with by the US -- replacing Russia. On 6 May 2011, 106 years later, exactly the same thing

had transpired with geo-political ramifications yet to be comprehended and felt.

How could this happen? Had this been an episode of *Star Trek*, the outcome was as if *Romulan* forces had acquired *Federation* shield frequencies. In fact, it is a most appropriate analogy, given the fact that the Chinese, over a 30-year period, have infiltrated critical elements of the US industrial base, which is, of course, inseparable from the defense industrial base.

In addition to targeting automotive, aerospace and specialty metals, they have paid particular attention to the electronics industry. Through mergers, JVs, outright acquisition and industrial espionage, they have gained access and control to sensitive technologies.

One area of particular interest is electronic connectors, which the Chinese have designated as a high priority sector. No one really understood why – they would have if they'd given it more thought – but by 2006, the Chinese were producing a third of the world's supply of absolutely-critical-to-everything-using-power electronic connectors. By 2011, they controlled 75% of the world's electronic connector production.

The Chinese paid particular attention to US Patent # 4972470 published 20th November 1990:

“A configurable connector between two or more devices with at least one of the devices being capable of programming the connector through an interface therewith. The connector contains programmable electronic circuitry capable of being instructed by the device whereby the connector assumes a desired connecting configuration and/or function. In one embodiment the connector is programmed to inquire and determine the

configuration of the device to which it is connected. With the results of its analysis the connector adapts the necessary timing, pin-outs, voltages, and other parameters to assure proper communication between the connected

devices. In other embodiments the connector contains electronic components to add specific functions for data exchange, such as data buffering, data encryption and the like. In addition, the connector is programmable with interchangeable pin designations thereby obviating the need for rewiring for different applications and physical connections.”

<http://www.freepatentsonline.com/4972470.pdf>

Realizing they had stumbled onto just what they needed to defeat a technologically superior and network-centric dependent US military, the Chinese wasted no time acquiring this technology. Additionally, they adopted an insidious strategy to implement this initiative designated TCSEC or Total Control Systems Electronics Compromise.

Under the pretext of a benign investment, US-based businesses, fronting for the Chinese firm NORINCO, acquired a controlling interest in the company developing this “smart” electronic connector and imbued it with new capabilities – including distance programming. Research revealed “*Norinco was established in 1980 with the approval of the State Council of China, and is overseen by the Commission on Science, Technology and Industry for National Defense (COSTIND). According to the congressional testimony of Gary Milhollin of the Wisconsin Project on Nuclear Arms Control in 1997, Norinco subsidiaries in the U.S. include: Beta Chemical, Beta First, Beta.*”

As anyone in the electronics industry knows, electronic connectors are found in *everything* energized; computers, cars, trucks, aircraft, ships, buildings, etc. Moreover, a September, 2006, release from ITT Electronic Components, approaching a century of existence, made clear the method and reason behind the Chinese quest for dominance in this area: “*The company has developed a variety of special-purpose electrical connectors designed for harsh environment and mission-critical applications in the military, aerospace, and hydrospace industries, including special release connectors, bulkhead and hull-penetrating connectors, and custom cable assemblies.*”

“With 90 years of experience, ITT is an industry leader for custom-designed connectors and cable assemblies for extreme environments - pressure, temperature, vibration or shock,” comments Domenick Lecce, product manager for ITT. “Our products are highly engineered and custom designed

for complex applications requiring special features, high reliability, and rigorous testing procedures.”

“The company’s special release connectors for aerospace applications feature special umbilical and lanyard release functions that automatically disconnect at the time of system launch. The connectors can incorporate both pneumatic and electrical lines in the same assembly and are suitable for inter-stage separation, weapons storage, and pylon applications.

“Special connector capabilities for harsh undersea applications include: custom connectors for submarine sonar sets; wet mateable connectors and umbilical cable assemblies for hull-mounted sonar arrays; lanyard-release connectors and umbilical cable assemblies for torpedo tube-launch missile systems; header assemblies for sonar system canisters; hull and missile tube penetrations; and a complete set for surface ship launch systems.

“The company’s custom connectors and assemblies are specified in a number of major aerospace and hydrospace programs, including the Patriot and Tomahawk missiles, the Delta IV Launch Vehicle, the International Space Station, and the CVN-78 aircraft carrier (scheduled to launch in 2015).”

The interest of the Chinese was further piqued when ITT Electronics noted the following in a 2004 company publication: *“‘For the want of a nail, the kingdom was lost’. One year ago, that proverb (attributed to Benjamin Franklin) -- which illustrates how one small detail, a horseshoe nail, can determine the outcome of an entire war -- was probably reverberating through the halls of Raytheon. This leading aerospace and defense systems supplier was in danger of being the broken link in a delivery chain for a huge and important missile defense system for the U.S. government, all because of a tiny connector.*

“Unable to get its connector supplier to meet the necessary quality and delivery criteria and with time running out, Raytheon turned to ITT Industries’ Electronic Components connector division. Working across

company borders, with strong support from senior management and day-to-day interaction and oversight from Raytheon, a 20-person Electronic Components team designed, tooled, tested, produced and delivered 12,000

Cannon brand connectors in a very compressed timeframe and got the Sea-Based X-Band Radar (XBR) project back on track.”

Taking advantage of a lax security environment within the US global supply and supplier chain, and a favorable political climate thanks to massive investment capabilities and opportunities offered by Beijing, a rapidly eroding US industrial base, and multiple states all too eager to get on the gravy train with the intent of restoring jobs lost to offshoring, the Chinese moved to acquire ITT Electronics.

This was accomplished in 2007.

Recognizing in the late 1990s that it could now totally infiltrate the US industrial and military industrial base, it targeted four developing and on-going weapons systems programs: The F-22 Raptor/F-35 Lightning II; Aegis fleet defense and countermeasures system; Bradley Fighting Vehicle and the Advanced Amphibious Assault Vehicle (AAAV). Moreover, the US Department of Defense moving to a weapons systems developmental open architecture along with a COTS (Commercial Off-The-Shelf) mandate to defense contractors inclusive of Boeing, Lockheed-Martin, Northrop-Grumman, Raytheon, General Electric, General Dynamics Electric Boat Division, Pratt and Whitney and others had sown the seeds of operationally comprised weapons and propulsion systems. The rationale, with caveat, being expressed thusly: *“The motivation for using COTS components is that they will reduce overall system development costs and involve less development time because the components can be bought instead of being developed from scratch. This could prove to be useful for software development because of the ever-increasing costs. Many considered COTS to be the Silver bullet during the nineties but COTS development came with many not so obvious trade-offs (Overall cost and development time can definitely be reduced, but often at the cost of an increase in software component integration work and a dependency on a third-party component vendor).”*

As the events of May 2011 would confirm, the latter concern “dependency on a third-party component vendor” was all too true.

The move towards globalization and the assumption that it is no longer necessary to protect and perpetuate the US industrial base, has led many in the DoD to assume that performance and cost effectiveness is the only real criteria to ensure that “the US warfighter gets the best equipment; no matter where it comes from.”

This atmosphere created by the COTS mandate within the US supplier base also led many to ignore the *Berry Amendment*, which called for specialty metals critical to national security to be sourced only here; the nullification of “Buy American” requirements by the US military, and the near destruction of the MILSPEC product identification and specifications code for military hardware and software components.

“Wal-Mart Military”

Some concerned individuals within industry, government and the Pentagon were derisively calling the then current state of affairs in terms of weapons systems development and procurement, along with acquisition of support materiel, as “The Wal-Mart Military”. Economy and competitiveness, not security and performance, were the overarching parameters of DoD supplier participation in 2006.

A veritable Pandora’s box of built-in offensive/defensive/detection systems security compromise was set in motion due to the shortsightedness and lack of vision by too many within industry and government who should have known better. The blood of US naval and aviation personnel as a result of the disastrous event that unfolded in this scenario six years from now is therefore on their hands, not the Chinese.

Destruction of The Seventh Fleet: The Culprit



Shaanxi Y-8 AEW/ELINT in flight

Through the use of distance programmable electronic connectors, the Chinese, using their Y-8C AEW and ELINT (electronic intelligence) aircraft, were able to activate imbedded programming in connectors within every system on ships, submarines, and aircraft of the Seventh Fleet and vehicles of Fleet support forces. As noted in a *Chinese Defense Today* analysis in 2006 “*Like the U.S. C-130 Hercules, the Shaanxi Y-8 four-engine turboprop transport aircraft has been developed into many special purposes variants. The PLA Air Force was known to have been using the Y-8 for special electronic warfare (EW) missions including electronic intelligence (ELINT) and offensive electronic countermeasures (ECM) in the past, but little was known about these programs until an electronic warfare variant Y-8 was first spotted in operation in Summer 2004.*

“While detailed information regarding the onboard mission equipment is not available, it is believed that the new EW/ELINT variant Y-8 is equipped

with an extensive array of sophisticated intelligence gathering equipment to monitor enemy electronic activities. The aircraft may also be capable of launching offensive jamming against enemy communications and radar systems.

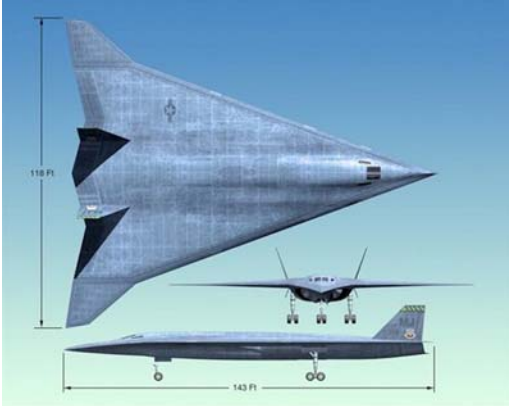
“There has been rumor suggesting that some of the mission equipment may come from the U.S. Navy EP-3 ELINT aircraft, which made an emergency landing in Hainan Island in April 2001 after colliding with a Chinese fighter, but this cannot be confirmed. The PLA may well be capable of developing its own indigenous EW/ELINT system as a result of the country’s booming electronics and telecommunications industry.”

The fact that they had been able to provide a multitude of components at the tier 4 and below supplier (at present, there is no requirement by the DoD to identify supplier origins beyond the third tier) level for at least four critical weapons systems, Aegis 9.0, Bradley Fighting Vehicle, F-22 Raptor/F-35 Lightning II and the Advanced Amphibious Assault Vehicle, plus their control of electronic connector production, allowed an all but complete infiltration of the US industrial and military industrial supply base. This same infiltration was made even easier when it was realized that thanks to virtually all ocean-borne shipping servicing the industrial base supply chain was in the hands of the Chinese, multiple opportunities to control or deny movement of components was a constant. A constant that permitted the Chinese to disrupt the supply chain at will.

The destruction of the Seventh Fleet on that fateful day in May 2011, caused the sitting President to invoke the words of Franklin Delano Roosevelt: *“It is a day which will live in infamy...”*

Epilogue:

0900 Zulu 6 May 2011



Proposed B-3 Future Attack Bomber; capable of Mach 2.7 atmospheric cruise, and Mach 14 sub-orbital velocity

Every means by which the Americans can attack or defend has been neutralized, in a de facto sense, on a global scale. Committing the other Carrier Battle Groups with their Nimitz-class carriers is out of the question considering the utter destruction of the Seventh Fleet.

The Chinese, sensing that they should seize the opportunity to become the dominant world power, decide to bring their ICBM force on line, with all large American cities and key bases targeted. Their ballistic missile program reached operational status five years sooner than western intelligence sources had indicated, thanks to Boeing booster technology inadvertently provided in the late 90s.

Now in full launch mode, the Chinese government is demanding that the US sue for peace immediately or suffer the consequences, and the US President, for a moment feeling he has no choice, takes steps towards the process of acceding to Chinese demands rather than risk a third global war wherein assured destruction was not mutual.

Without warning, however, Chinese ICBMs sitting in their silos or sea-launch ships disguised as freighters, start exploding.

The Chinese Second Fleet, flush with victory over the Americans, has far less time to celebrate than imagined as their radars pick up incoming sea-skimming *Harpoon Block IV* long range (2500nm) supersonic anti-ship cruise missiles co-developed with the Russians. They had been launched from the B-2s that had been ordered out of the battlespace by *Blue Ridge* before its destruction. Undetected, they had reversed course, and recognizing that the ships, submarines and aircraft of the Seventh fleet were somehow having their defensive/offensive/detection systems reprogrammed from a distant source, linked with radar and communications jamming EF-22 *Wild Ferrets*, whose performance surpassed that of the venerable EA-6D *Prowlers*, EF-111E *Ravens* and RC-135G *Rivet Joints* being phased out by the Air Force and Navy.

Thanks to suppression of Chinese radars and communications both airborne and surface – if only temporarily – each of the 10 B-2s were able to select and engage multiple naval targets, with the *Zhu Ronghi* disintegrating subsequent to the impact of seven air-launched Harpoon IVs. In short order, the carrier force was destroyed, save for 2 hydrofoil and 1 catamaran fast attack craft. They lived to tell the tale...

Miles above the battle zone, Chinese F-12s and SU-MKK3s find themselves under attack from an unseen foe as multiple aircraft are destroyed. Unknown to the Chinese and the rest of the world, work had continued on the hypersonic Lockheed-Martin SR-73 *Aurora* and unlike its predecessor the SR-71, an attack version, the A-14, had been developed and deployed.

Based in classified locations, 10 A-14s had been rushed – an expression taking on new meaning when an aircraft flies hypersonically – to the battlespace when it became apparent the Seventh Fleet was in serious trouble. Flying at 100,000ft and Mach 6+, they tracked the Chinese fighters with enhanced look down-shoot down target acquisition radar.

In parallel action, Chinese ICBMs were being destroyed in their silos and mobile launch platforms across China by as yet unacknowledged – and undetected -- Northrop-Grumman B-3 *Ghost* hypersonic transatmospheric Future Attack Bombers.

What became clear to the Chinese is that the A-14 and B-3 were impervious to distance reprogramming of vital systems, and worse, couldn't be tracked.

Concerned Pentagon officials working with intelligence officers within the CIA and NSA, who, since 9/11 had restructured intelligence services data sharing platforms in accordance with the Patriot Act (Hart-Rudman recommendations as well) had worked to keep the development and production of SR-73, A-14 and B-3 separate from an industrial base supply chain they felt was severely compromised. They knew the Berry Amendment was routinely ignored or skirted as regards provision of defense specialty metals, and the fact that open architecture and COTS mandates were creating a weapons systems performance and security disaster.

Northrop-Grumman, Lockheed-Martin and Boeing IDS officials, under a special confidentiality arrangement, provided full cooperation. Funding had already been allocated through the B-2 program, as some had suspected, not long after this super-secret project had been revealed.

They named it *Project Purity*, and in the aftermath of the Seventh Fleet disaster, Congress dictated that all future critical weapons systems development and production programs would follow its strict guidelines calling for ALL supplier identification, a “homegrown” requirement (the UK, Canadian and Australian defense firms were exempted) along with a strengthening of the Berry amendment.

The Chinese were themselves suing for peace following the very timely intervention of the A-14, SR-73 and B-3.

The Seventh Fleet had not died in vain...

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Battle of The South China Sea: 6 May 2011



Hainan Island Lingshui Military Air Base as viewed by Ikonos Satellite in 2001

Lessons Learned

“Where there is arrogance, there is opportunity.” Confucius; Shandong Province, China-- Circa 469 BC

We have presented a future scenario that, under the current state of the industrial and military industrial base and its supply chain can become all too real. We have documented the prime and subcontractors to the fourth tier, but beyond that, it is next to impossible to develop additional supplier identification data.

The Department of Defense itself does not require component origins identification beyond the third tier, and this makes maintaining cohesion and program security within the manufacturing and supply base problematic.

We know from personal experience, born of arranged interactions with Chinese representatives, most recently with an entire contingent of industry, government and military personnel that specific strategies are in place to

gain control of elements, major and minor, of the US industrial and defense industrial base.

Colleagues in industry who have interacted with these same personnel, have stated, “The acquisition budget for automotive, aerospace, textile (what’s left of it), metal, energy, electronics and telecommunications companies approaches 1 trillion dollars”. We have also been advised that a specific directive has been issued to find and secure automotive suppliers in distress with high technology capabilities. The intent is not to be angels with a desire to turn these companies around, but to demonstrate interest at the 11th hour when corporate principals are desperate to satisfy creditors and maintain some semblance of viability.

They will happily take control, and that strategy is confirmed via the Chinese acquisition of MG Rover, when subsequent to acquiring controlling interest, wasted no time moving critical manufacturing elements and process to China. An empty shell of a firm was left, along with a direct job loss of 5,000 personnel. China will now build the Rover 75 in China, Oklahoma and other locales.

In order to test the implementation of this directive in real-time, we were directly involved in establishing dialogue between the largest Chinese automotive supplier and two of the largest tier one American automotive suppliers, one of whom was in bankruptcy and another on that path. We asked as a condition of interaction that the Chinese firm approach this proposed buy-in as one of non-controlling interest, which would have the effect of providing much needed operational cash -- and possibly a lifting out of bankruptcy for one and forestalling that possibility with the other -- for the two American firms and a larger US footprint of the Chinese company.

They weren’t interested in coming aboard to help maintain the viability of either company; they were instead “desirous of acquiring as many production facilities as possible and moving them to China for the one in

Bankruptcy, and make an offer for the other once it had gone into bankruptcy.” (One of the American firms has since opened new factories in China, while closing them here.) Indeed, the strategy was about control.

Regarding electronics firms, we have observed multiple instances wherein the approach was considerably more benevolent: A friendly offer of financial assistance “until they worked their problems out.” All that was required was for one or several of their personnel, depending on the size of the company, to come aboard as staff, “so they could better understand the inner workings of the company.”

This process has allowed the Chinese to undermine industrial espionage, intellectual property, proprietary and copyright laws by quite legitimately requesting a “sharing” of technological process with “company colleagues” even though these colleagues were in a facility in Shandong province or Shanghai, as examples.

According to US intelligence officials, this is the means by which Aegis Weapons System technology was stolen: A company fronting for the Chinese became a subcontractor to Lockheed-Martin during Aegis development and acquired enough data to construct their own clone. At this time, up to four Luyang II-class destroyers have been acknowledged as featuring this missile defense system.

F-22 Raptor



This air superiority fighter is now operational, leads the world in overall capability, but based on what we have seen and observed this advantage will be short lived.

Raptor has 1,000 acknowledged suppliers in 42 states, and despite strict security measures in place over the research and development phase of the

project begun in the early 90s, there is every reason to believe that Raptor's critical systems, avionics, propulsion and weapons, have already been compromised. The ease with which Chinese operatives obtained Aegis technology utterly supports this contention.

When this volume of suppliers for a crucial weapons platform is evident, statistical analysis must be required to provide a clear picture of who does what and supplies what; with no exemptions or exceptions to origins safeguards presumably developed subsequent to these analyses. The primes, and second through fourth tier subcontractors, should be required to verify the origins -- with very specific language -- of a component, no matter how small or common, as in the case of the programmable connectors that were the primary factor in the scenario destruction of the Seventh Fleet.

Contractors:

Lockheed Martin Aeronautical Systems: F-22 program management, the integrated forebody (nose section) and forward fuselage (including the cockpit and inlets), leading edges of the wings, the fins and stabilators, flaps, ailerons, landing gear and final assembly of the aircraft.

Lockheed Martin Tactical Aircraft Systems: Center fuselage, stores management, integrated navigation and electronic warfare systems (INEWS), the communications, navigation, and identification (CNI) system, and the weapon support system.

Boeing: wings, aft fuselage (including the structures necessary for engine and nozzle installation), radar system development and testing, avionics integration, the training system, and flight-test development and management.

Pratt & Whitney: F119-PW-100 engines that power the Raptor.

Major Subcontractors (partial list):

Northrop Grumman, Texas Instruments, Kidde-Graviner Ltd., Allied-Signal Aerospace, Hughes Radar Systems, Harris, Fairchild Defense, GEC Avionics, Lockheed Sanders, Kaiser Electronics, Digital Equipment Corp., Rosemount Aerospace, Curtiss-Wright Flight Systems, Dowty Decoto, EDO Corp., Lear Astronics Corp., Parker-Hannifin Corp., Simmonds Precision, Sterer Engineering, TRW, XAR, Motorola, Hamilton Standard, Sanders/GE Joint Venture, Menasco Aerospace.

AEGIS MISSILE DEFENSE SYSTEM



“The Aegis weapons system is a surface-to-air integrated weapons system. It is designed to defend the fleet against any airborne threat. The heart of the Aegis system is the AN/SPY-1 Phased-array radar system coupled with the AN/UYK-1 high-speed computer system. This combination is able to detect incoming missiles or aircraft, sort them by assigning a threat value, assign on-board Standard surface-to-air missiles, and guide the missiles to their targets. Aegis can track up to 100 targets at any given time. The radar panels are flat structures, mounted to give 360-degree coverage around the ship. These are an improvement over the old rotating type of radar in that there are no moving parts. The old rotating radar covered ONLY the area they were scanning. Phased arrays switch rapidly and cover the entire range around the ship in milliseconds.”

Prime Contractor:

Lockheed Martin Naval Electronics and Surveillance Systems

Subcontractors include:

General Dynamics/Anteon (acquisition completed in 6/2006)

BAE SYSTEMS Applied Technologies
Northrop Grumman Information Technologies
Thomas Enterprises, Inc
Basic Commerce Industries
VSE
Battelle, ITT Industries Inc.
Orbital Sciences Corp.

“China's military put its new guided missile destroyers on display last week, disclosing its two new warships that are equipped with Aegis-type battle management systems. Two new Luyang II guided missile destroyers are part of China's naval buildup. The two Luyang II guided missile destroyers are Beijing's first Aegis-type ships. The ships are currently undergoing sea trials. U.S. intelligence officials say China stole the technology for the Aegis battle management system by setting up a front company in the United States that became a subcontractor for the Aegis system manufacturer.” July 2005

Prime Contractor for Aegis/Ground-based Midcourse Defense (GMD) Exo-atmospheric Ballistic Missile Defense system: Boeing

“Boeing as the prime-contractor is responsible for the development, test, and integration of all the GMD elements, including the Ground-based Interceptor, X-Band Radar Prototype, Fire Control & Communications systems, Upgraded Early Warning Radars and interfaces to the Defense Support Program. Major team members include Raytheon Company (kill vehicle, radars); Northrop Grumman Mission Systems (BMC2); Lockheed Martin Space Systems Company (booster vehicles); Orbital Sciences Corporation (booster vehicles); Bechtel (facilities design and construction); and Teledyne Brown Engineering (Integrated Systems Testing Capabilities and technical services).”

Boeing Subcontractors

Boeing subcontractors include “Orbital Sciences Corporation, Lockheed Martin, and Raytheon. Boeing is in charge of Ground Based Interceptor (GBI) development, and the project is currently [2004/2005] undergoing extensive ground and flight tests. As currently envisioned, each GBI missile will consist of two main components: a three-stage booster rocket and the Exoatmospheric Kill Vehicle (EKV).”

The Missile Defense Agency “currently has two separate booster rockets in the works: Orbital Sciences Corporation is building the Orbital Boost Vehicle (OBV), while Lockheed Martin is designing the Boost Vehicle Plus (BV-Plus). ... On top of either the OBV or the BV-Plus will sit Raytheon’s Exoatmospheric Kill Vehicle. The EKV is designed to track and destroy ballistic missiles outside the Earth’s atmosphere, hence its ‘exoatmospheric’ nature. Each kill vehicle costs between \$20 and \$25 million and will include a range of sophisticated devices: infrared sensors, an internal navigational system, antennas, thruster engines, a cryogenic cooling system, and a small computer, all designed to maximize the probability of a successful ‘kill.’ Yet even with all its components, the entire EKV will fit comfortably on a kitchen table. It is only 55 inches long, 24 inches in diameter, and weighs 140 pounds.” Raytheon is the “interceptor lead for the Kinetic Energy Interceptor program ... [and] is also providing the Sea-Based X-band radar and Upgraded Early Warning Radar for the GMD segment, the Space Tracking and Surveillance System payload, the Ballistic Missile Defense System radar, and THAAD (Theater High Altitude Area Defense) radar and battle management software.

“Raytheon is leading the SM-3 [STANDARD Missile-3] integrated team effort, supported by Aerojet, the Boeing Company and Alliant Techsystems, which are providing major subsystems.”

Kinetic Energy Subcontractors Aegis/GMD

The following are subcontractors for the Kinetic Energy Interceptor as of May 2005

- Northrop-Grumman
- Raytheon
- Orbital Sciences Corporation
- Aerojet (<http://www.aerojet.com/default.cfm>)
- ATK (<http://www.atk.com/>)
- Ball Aerospace & Technologies (<http://www.ball.com/aerospace/index.html>)
- Booz Allen & Hamilton Inc.
- Davidson Technologies Inc. (<http://www.davidson-tech.com/>)

- IET (Information Extraction & Transport Inc.)
- Photon Research Associates (Raytheon) (<http://www.photon.com/>)
- Rockwell Collins (<http://www.rockwellcollins.com/>)
- Science Applications International Corporation
- Schafer Corporation (<http://www.schafercorp.com/>)
- SEI (Systems & Electronics Inc. (<http://www.seistl.com/>))
- 3D Research Corporation (<http://www.3drc.com/>)
-

Advanced Amphibious Assault Vehicle (now designated Expeditionary Force Vehicle or EFV)



“The Marine Corps plans to replace the amphibious assault vehicle with 1,013 advanced amphibious assault vehicles for \$6.7 billion, including a \$456-million increase due to a 2-year procurement delay. With a water speed of 23 to 29 miles per hour, the new vehicle could be launched from amphibious ships 25 miles or more offshore and reach shore far more quickly than the current vehicle. This improved mobility would reduce the risk to Navy ships from missiles, aircraft, boats, and mines. Until the new vehicle is fielded, beginning in 2008, the Marine Corps anticipates spending more to maintain the current vehicle.

“The Marine Corps is developing the AAV to replace the AAV as its primary combat vehicle for transporting troops on land and from ship to shore. The AAV must satisfy many operational requirements, which will provide increased capabilities compared to the AAV and improve the ship-to-shore movement, thus allowing the Marine Corps and the Navy to more effectively implement OMFTS” (Operational Maneuver From The Sea)

Prime Contractor:

General Dynamics Land Systems (GDLS) and its division
General Dynamics Amphibious Systems GDAMS

Subcontractors:

MTU, Allison, Honeywell, Ball and CDC.

Our research notes there are subcontractors in 47 states, Canada, Germany and Israel, and we are requesting a comprehensive list showing all supplier tiers. Operational concerns include aluminum armor which produces highly toxic fumes when ignited and is potentially vulnerable to most rocket propelled grenades (RPGs) bullet and cannon rounds above 14.5mm and TOW-type anti-tank weapons.

At this time, no comprehensive list existed and while AAV is possessed of advanced weapons sighting optronics and reactive armor, there is little in the way of potentially compromised technology through the supplier base for which the DoD should be concerned.

Bradley Fighting Vehicle M2A3 and M3A3



“The mission of the Bradley Fighting Vehicle [BFV] is to provide mobile protected transport of an infantry squad to critical points on the battlefield and to perform cavalry scout missions. The BFVS will also provide overwatching fires to support dismounted infantry and to suppress or defeat enemy tanks and other fighting vehicles. The Bradley Fighting Vehicle is a fully armored, fully tracked vehicle designed to carry Mechanized Infantry into close contact with the enemy. It possesses sufficient cross-country mobility to keep up with the Abrams Main Battle Tank, medium and long-range firepower capable of defeating any vehicle on the battlefield, and is adequately

armored to protect the crew from artillery and small arms threats. During World War II, the vehicle's namesake, General Omar Bradley, was known as the "GI General".

The Bradley is able to close with and destroy enemy forces in support of mounted and dismounted Infantry and Cavalry combat operations. The Bradley Fighting Vehicle family currently consists of two vehicles: the M2 Infantry Fighting Vehicle and the M3 Cavalry Fighting Vehicle. Just as with its predecessor, the M113 family, the Bradley will eventually be the platform for a wide range of support vehicles."

Prime Contractor:

BAE SYSTEMS

Subcontractors:

Lockheed-Martin Information Systems (Training Simulations)

General Dynamics Defense Systems

DRS Technologies (Optronics)

Hughes Aircraft (TOW Missile)

A complete list of identified contractors was requested from the prime, but we were advised that no comprehensive list existed. And while they would work with us to develop, they held out no hope that such a list would ever be compiled owing to "competitive intelligence" concerns and not – surprisingly – "national security" concerns.

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Conclusion:

The research that went into this study provided many lessons learned though the following are the major ones:

- If science, engineering and technology skill sets are eroding within the U.S. across the board, it will not be long before we cannot compete economically or militarily with a China that is ensuring they out-produce us in scientists and engineers, in R&D, and in manufacturing capabilities and volumes. The Congress needs to increase R&D for the sciences and engineering across the board. The Congress should also find incentives for young Americans who want to become scientists, engineers, diplomats and linguists – skills the nation desperately needs by aiding with tuition.
- If American companies cannot provide transparency in their global supply chains, they cannot answer the question “which components of our weapon systems are made in China?” DoD must ask the question, if it expects industry to provide answers below Tier III. We know that as China becomes the manufacturing capitol of the world, it will become increasingly difficult for all industries to comply with the Berry Amendment.
- If the US is importing large quantities of critical technologies from China, they most certainly will also benefit from them for military purposes.
- If the Chinese control global shipping, they will not permit those ships to feed our economy or our military if we are at war with them. Even minor supply disruptions could produce economic chaos in the U.S. and surge capability would disappear.
- Congress needs to ask the Department of Defense to ameliorate these problems and specifically ask how the first part of the scenario described in Question 4 in which China uses information warfare to defeat US forces will be prevented.
- The United States needs a plan to “win” the war, economic, diplomatic, political and military with China. Congress must task some USG entity to write this master plan for the nation. Our future as a free society and a superpower depends on its success. This is an issue of national security.

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