

IN THE NEWS

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World News

In response to China's military expansion, the road to offensive militarization of Japan continues. For instance, the Japanese lower house of parliament approved legislation allowing an expanded military role [1]. What's more, China issued a warning to Japan regarding its criticism of oil and gas exploration near contested waters [2]. Ratcheting up tensions, China started conducting war exercises in disputed waters [3]. Elsewhere, the Philippines has plans to reopen the Subic Bay naval base stationing two frigates and fighter jet aircraft [4].

The war against the Islamic State (IS) is widening. For instance, Turkey agreed to allow the US to attack the IS from within its border [5]. This follows an IS suicide attack on a Turkish town next to the Syrian border that killed at least 32 people [6]. Then, for the first time, Turkish warplanes bombed IS targets in Syria [7]. In effect, Turkey went from a passive observer to an active participant in the war against the IS [8].

Elsewhere, the situation in Afghanistan continues to deteriorate. For instance, after 3 days of fighting, over 100 Afghanistan police at a formally peaceful province, surrendered to the Taliban and provided a large stockpile of weapons [9]. Then, as the Afghan government prepared for peace talks with the Taliban, two rockets slammed into Kabul airport [10]. All the while, terrorists continue attacking civilians. For instance, a suicide bomber killed over a dozen people in a crowded market located in north-western Afghanistan [11]. Another emerging problem is the rise of the IS within Afghanistan [12]. For example, the stepped up US airstrikes in Afghanistan include IS targets [13].

1. Yamaguchi, Mari, Miami Herald, *Japan lower house of parliament OKs expanded military role*, July 16, 2015.

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Security

Personally Identifiable Information (PII) is under significant attack. For instance, the latest OPM attack is part of nine major known PII breaches during the past year [1]. Furthermore, there are fears the OPM breach may allow China to identify US spies [2].

Patching software to fix security holes continues to be a significant activity. For instance, Oracle's patch updated included 193 secu-

rity fixes [3]. Concurrently, Microsoft released a patch to address 14 bulletins [4]. Finally, Adobe is working on a patch to correct two zero date vulnerabilities with the flash player [5]. At the other extreme, Chrysler issued a recall to fix a security hole that allows bad actors to remotely bypass the driver and seize control the car [6].

Chinese hackers like to use other countries resources in executing attacks. For in-

stance, several US servers were used by China in recent attacks [7].

1. Gertz, Bill, Washington Free Beacon, *OPM Hack Part of Large-Scale Cyber Attack On Personal Data*, July 16, 2015.
2. Mazzetti, Mark, and Sanger, David E., New York Times, *U.S. Fears Data Stolen by Chinese Hacker Could Identify Spies*, July 24, 2015.

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Special points of interest:

- Islamic terrorist killed 5 in Chattanooga
- Turkey bombs IS targets

Security

(Continued from page 1)

3. Greenberg, Adam, SC Magazine, *Oracle's patch update contains 193 security fixes*, July 15, 2015.
4. Walker, Danielle, SC Magazine, *Microsoft releases 14 bulletins on Patch Tuesday, ends Windows Server 2003 support*, July 14, 2015.
5. Greenberg, Adam, SC Magazine, *Adobe working to patch two critical zero-day vulnerabilities in Flash Player*, July 13, 2015.
6. Delano, Jon, CBS/KDKA, *Chrysler Issues Recall To Prevent Hacking Of Its Car Software*, July 24, 2015.
7. Gertz, Bill, Washington Free Beacon, *Chinese Hackers Use US Servers In Cyber Attacks*, July 17, 2015.

Normally, in the presence
of radiation,
communication links fail.
But with autonomous
robots, you don't need
communications.—Vijay
Kumar

World News

(Continued from page 1)

2. Blanchard, Ben, Reuters/Business Insider, *China just gave Japan an ominous warning*, July 22, 2015.
3. Times of India, *China starts naval drills in disputed South China Sea amid heightened tensions*, July 23, 2015.
4. The Guardian, *Philippines reopens Subic Bay as military base to cover South China Sea*, July 15, 2015.
5. Sly, Liz, and DeYoung, Karen, Washington Post, *Turkey agrees to allow U.S. military to use its base to attack Islamic State*, July 23, 2015.
6. BBC News, *Islamic State: Turkey allows US to use airbase for strikes*, July 23, 2015.
7. BBC News, *Turkey bombs Islamic State targets in Syria*, July 24, 2015.
8. Lowen, Mark, BBC News, *Turkey - from reluctant observer to full player in IS fight*, July 25, 2015.
9. Faiez, Rahim, AP, *Afghan Officials Say Taliban Take Remote Police Base in Deal*, July 26, 2015.
10. Stangler, Cole, International Business Times, *Two Rockets Land At Kabul Airport Ahead Of Afghanistan Peace Talk*, July 25, 2015.
11. Salahuddin, Sayed, Washington Post, *Suicide bomber strikes market in Afghanistan, killing more than a dozen*, July 22, 2015.
12. Cloud, David S., Los Angeles Times, *Islamic State could trip up U.S. plans to leave Afghanistan*, July 19, 2015.
13. Goldstein, Joseph, New York Times, *U.S. Steps Up Airstrikes in Afghanistan, Even Targeting ISIS*, July 15, 2015.

Terrorism

One again an Islamic terrorist struck within the US. This time, a Kuwait born gunman killed four Marines at a Naval training site in Chattanooga, TN [1]. Later a U.S. Navy Petty Officer also died from wounds received during the shooting [2].

In other troubling news, the capabilities of the Islamic State (IS) has weapons capable of putting ships at risk. Case in point, the IS claimed responsibility for a missile attack that set an Egyptian navy ship ablaze [3].

In Iraq, terrorists set off a bomb in a crowded marketplace killing at least 130 people [4]. Then, the IS claimed responsibility for a car bomb attack in Bagdad that killed at least 20 [5].

Next door, in Syria, reports

indicate the IS used poison gas against Kurdish-controlled areas [6]. So if, the IS has chemical weapons, how long before they are smuggled into the US?

1. Moyer, Justin Wm., and Barbash, Fred, Washington Post, *What we know so far about the Chattanooga killings*, July 17, 2015.
2. Payne, Ed, and Blackwell, Victor, CNN, *Fifth service member dies after Chattanooga shooting*, July 18, 2015.
3. Knecht, Eric, and Abdelaty, Ali, Reuters, *Islamic State says it launched rocket attack on Egypt navy vessel*, July 16, 2015.
4. Salim, Mustafa, and Morris, Loveday, Washington Post, *At least 130 are dead in Iraq after a massive bomb attack*, July 18, 2015.
5. Kalin, Stephen, Reuters, *Islamic State claims Bagdad car blast that killed 20*, July 23, 2015.
6. Perry, Tom, Reuters, *Islamic State used poison gas in northeast Syria: Kurds, monitor*, July 17, 2015.

We're seeing the arrival of conversational robots that can walk in our world. It's a golden age of invention.—

David Hanson

Economy

Another American company falls to unfair Chinese trade practices. In past newsletters, we highlighted China's monopoly on Rare Earth elements and their ability to maintain price control. The export controls China used to drive up cost were found by the WTO to be unfair and have since been scrapped [1]. However, the US company Molycorp, invested heavily in mining rare earths when the price was high and as a consequence, filed for bankruptcy [2]. Even though rare earth elements are critical for many military electronic systems, it looks like our dependence on China imports will continue. As long as un-

fair trade is allowed to flourish, US companies will continue to pay the price.

For the week ending July 11, the number of first time unemployment claims reported by the Labor Department was 281,000 [3]. Then for the week ending July 18, the number fell to 255,000, the lowest level since 1997 [4]. However, with so many people not counted in the work place, the overall employment picture is cloudy. One thing is certain, were fair trade practices in place, the employment picture would certainly be better.

1. Yuan, Helen, Bloomberg, *China Scraps Rare Earth Export Controls After Los-*

ing WTO Appeal, January 5, 2015.

2. Jaffe, Mark, The Denver Post, *Greenwood Village-based Molycorp files for bankruptcy*, June 25, 2015.
3. Mutikani, Lucia, Reuters, *U.S. jobless claims, housing data point to firming economy*, July 16, 2015.
4. Reuters, *US weekly jobless claims total 255,000 vs 285,000 est, lowest level since 1973*, July 23, 2015.

AI Threat

In a recent IEEE article, the technical publication mocks the threat from Artificial Intelligence (AI) programs [1]. However, going back to Newsletter volume 1, number 25, readers can see we have tracked the issue with algorithm driven programs, referred to as "algos." In the case of algos, these are AI driven programs that make decisions independent of human intervention (autonomously).

Additionally, there is already research going into autonomous AI driven weapon systems. For instance, the Air Force tested a smart missile that makes the final target selection [2]. Then there is the lethal autonomous weapons system (LAWS), robots that autonomously select and en-

gage targets [3]. Then there is a report, China is developing AI driven anti-ship mines [4]. There can be no question that such technology will be deployed. If AI robots are not deployed by our side, they will certainly be by those nations that wish us ill.

Consider, there is the potential for malicious software and network attacks directed against AI technology. Given the lack of a robust security engineering discipline seen in commercial products, exploitable security holes will exist. For instance, a zero-day vulnerability in select Fiat Chrysler cars was exploited to allow remote control of the engine, transmission, wheels, and brakes [5]. What past newsletters depict is what can happen when AI programs run amok.

Most certainly, some future article will detail AI technology gone wrong.

1. IEEE Spectrum, *Mocking AI Panic*, July 2015.
2. Markoff, John, *New York times, Fearing Bombs That Can Pick Whom to Kill*, November 11, 2014.
3. Knapton, Sarah, *Telegraph, Killer robots will leave humans 'utterly defenceless' warns professor*, May 27, 2015.
4. Arquilla, Jogn, *Communications of the ACM, The Dangers of Military Robots, the Risks of Online Voting*, July, 2015.
5. Abel, Robert, *SC Magazine, Zero-day in Fiat Chrysler feature allows remote control of vehicles*, July 21, 2015.

Above all, I would not expect a wise race, at great expense, to set loose an army of self-replicating robots.—Barney Oliver
