



# EIB World Trade Headlines

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## SOMETIMES YOU JUST NEED A BREAK FROM REALTY

**MERGERS FOR 2018:** For all of you with any money left, be aware of the next expected mergers so that you can get in on the ground floor and make some BIG bucks. Watch for these consolidations in 2018:

1. Hale Business Systems, Mary Kay Cosmetics, Fuller Brush, and W. R. Grace Co. will merge and become: Hale, Mary, Fuller, Grace.
2. Polygram Records, Warner Bros., and Zesta Crackers join forces and become: Poly, Warner Cracker.
3. 3M will merge with Goodyear and become: MMMGood.
4. Zippo Manufacturing, Audi Motors, Dofasco, and Dakota Mining will merge and become: ZipAudiDoDa.
5. FedEx is expected to join its competitor, UPS, and become: FedUP.
6. Fairchild Electronics and Honeywell Computers will become: Fairwell Honeychild.
7. Knotts Berry Farm and the National Organization of Women will become: Knott NOW!

## NEWSLETTER NOTES

\* **SOMETIMES YOU JUST NEED A BREAK FROM ALL OF IT:**

- \* Saab Launches a New Barracuda Arctic ...
- \* Global Ruggedized Device Market ...
- \* This Tiny Missile ...
- \* President Donald ...
- \* Comprehensive Analysis of Global ...
- \* Higher Oil Prices...
- \* SENATE COMMERCE ...
- \* Newly Unsealed Federal Indictment Charges...
- \* Training
- \* Boeing To Take Control ...
- \* Scientists from the University of ....
- \* Emerging Technologies in Medical Device ...
- \* Night Vision Devices...
- \* INTERNATIONAL SPACE COLLABORATION ...

## Saab Launches a New Barracuda Arctic Camouflage Net

Saab today announces the new multispectral Barracuda Arctic Camouflage Net that makes you blend in to any snowy operational theatre. It is designed to avoid detection from sensors, ranging from those using ultraviolet to wideband radar.

The Arctic environment is extreme and very special compared to other environments due to the climatic conditions whilst snow can have a wide variety of characteristics. Barracuda Arctic Camouflage Net is a two-sided camouflage net that enables quick and flexible operation to meet changes in the surrounding environment. One side is purely white and the other side is both white and shades of green/grey. This makes it possible to operate in amongst different colours of snow, at both high and low altitude environments.

“In the new threat scenarios we can see in the near future, everything is contested and complex whilst sensors operating outside the visual spectrum have proliferated. Opponents can challenge us in all domains and across the full electromagnetic spectrum. When information becomes a weapon, the one who wins the battle of signatures is at a distinct advantage. With the new Barracuda Arctic net you can be flexible,” says Görgen Johansson head of Saab’s business dynamics unit.

Barracuda’s advanced camouflage technology products have already been exported to more than 60 countries worldwide. Saab offers a unique package of tailor-made camouflage systems and force protection solutions that decrease the enemy’s ability to detect and engage. These solutions protect personnel, vehicles and base infrastructure against hostile sensors and enemy target acquisition.

Barracuda camouflage solutions offer multispectral protection. Everything from ultra-violet, visual, near infrared, short wave infrared to thermal sensors and radar. Built-in thermal radiation protection reduces the operating temperature inside vehicles and increases crew comfort, firing accuracy, and fuel efficiency.

Source: Saab AB (OMX Stockholm: SAAB B)  
Date: Jun 12, 2018

## Global Ruggedized Device Market Report To Observer Impressive Growth 2017: Market Size And Revenue By 2022

By Santosh Patil - June 25, 2018

The report provides study of “Ruggedized Device Market” from view of manufacturers, regions, product types and end industries. The research report observes and provides the ancient data along with present performance of the Ruggedized Device industry and estimates the future trend of Ruggedized Device market on the basis of this detailed study. The study shares “Ruggedized Device Market” presentation both in terms of volume and revenue.

Ruggedized Device market explains the growth of the industry by upstream & downstream, industry overall and progress, key companies, as well as type segment & market application and so on, and makes a scientific prediction for the development industry forecasts based on analysis, finally, analyses prospects for investment in the industry at the end of the report.

Ruggedized Device Market by Companies: , Panasonic, Xplore, DRS Technologies, Getac, DT Research, Dell, MobileDemand, AAEON, NEXCOM, HP, MilDef, Trimble, Kenton,K, And Many More

Geographically: This report is segmented into several key Regions

- North America
- Europe
- China
- Japan
- Southeast Asia
- India

Market Segmentation by Type: Rugged Notebook, Rugged Tablet, Rugged Handhelds,K

Market Segmentation by Application: Energy, Manufacturing, Construction, Transportation & Distribution, Public Safety, Retail, Medical, Government, MilitaryKeyword Market Lastline

## This Tiny Missile Smashes Incoming Artillery Rounds, Drones, And Possibly Much More

Lockheed Martin's Miniature Hit-to-Kill interceptor is small and cheap, which could make it an attractive option to defend various platforms.

The U.S. Army has awarded Lockheed Martin a \$2.6 million contract to continue development of its Miniature Hit-to-Kill interceptor, or MHTK. The service is interested in using the weapon to help troops on the ground knock down incoming artillery projectiles and small unmanned aerial vehicles, but the tiny missile, or other designs leveraging some portion of its technology, could possibly evolve to take on other roles.

The Maryland-headquartered defense contractor announced the deal in a press release on June 13, 2018. The contract also moves the MHTK out of the experimental science and technology phase and into formal development. The Army is pursuing the interceptor as one of the multiple weapons that will work with its truck-mounted Multi-Mission Launcher as part of what is now called the Extended Mission Area Missile (EMAM) program. The launcher and the rest of the complete air defense system, including a networked command and control setup and mobile fire-control radar, are part of the larger and obtusely named Indirect Fire Protection Capability, Increment 2 – Intercept, or IFPC Inc 2-I, effort.

"This award brings us one step closer to addressing a top battlefield priority," Hal Stuart, the Force Protection Program Manager at Lockheed Martin Missiles and Fire Control, said in a statement. MHTK offers "an effective and cost-efficient solution to defeat rockets, artillery shells, mortars and other airborne targets," he added, a mission commonly known as Counter-Rocket, Artillery, and Mortars, or C-RAM.

Lockheed Martin has been actively working on MHTK since 2012, developing the system with a combination of internal company funds and contracts from the Army. The company conducted its most recent controlled flight test, involving an interceptor with improved airframe and internal electronics, at the service's White Sands Missile Range in New Mexico in January 2018.

The complete system uses a radar on the ground to spot incoming threats and cue the missile toward them. A small active seeker inside the missile then takes over to guide the interceptor into its target. Without a warhead, and associated systems that come along with one, the interceptors themselves are relatively cheap, as well, with Lockheed Martin aiming for a unit cost as low as \$16,000. This is less than half that of a Stinger missile and exponentially cheaper than the price tag on traditional short-range missiles, such as the AIM-9X Sidewinder.

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The small size also expands the magazine depth of the Army's Multi-Mission Launcher, since four MHTKs can fit inside each one of its 15 launch cells. This means one launcher alone could conceivably carry a full load of 60 interceptors, which could help the complete system have the necessary volume to have the best chance of defending against a large-scale indirect attack.

The Army also envisions fielding individual Multi-Mission Launchers armed with a mix of different interceptors that could allow them to act as layered, short-range air defense systems all by themselves. The service has already selected the aforementioned AIM-9X for more traditional short-range air defense capability against low-flying aircraft and helicopters.

With launchers networked together, each one might not necessarily have to have all the different types of interceptors though, with radars cueing certain ones to the most suitable targets. This could also give the IFPC Inc 2-I systems greater flexibility to engage targets over a wider area, as well as share information back and forth with other, larger air defense systems with more powerful and longer-range sensors. In 2017, the Army demonstrated it could engage small drones with its long-range Patriot surface-to-air missiles if absolutely necessary.

MHTK had been competing more directly against a team made up of Raytheon and Israel's Rafael Advanced Defense Systems, who had been offering a missile called Sky Hunter. This was effectively a modified version of the Tamir inceptor, which is the weapon at the core of the Israeli Iron Dome defense system. Iron Dome's primary targets are also rockets and other artillery rounds.

The Army has also tested the millimeter wave radar-guided Longbow Hellfire as a possible option for the Multi-Mission Launcher. This could potentially give it a surface-to-surface attack capability, as well.

Together, the EMAM program and the Multi-Mission Launcher are both essential parts of the Army's effort to address an increasingly glaring short-range air defense gap and emerging concerns about swarms of small unmanned aircraft. There's always the long-standing and continued threat from mortars and larger artillery systems, as well.

With renewed concerns about future conflicts with near-peer opponents, such as Russia or China, the U.S. military as a whole has rediscovered a need to defend against possible aerial attacks and find answers to potential opponents' advanced artillery developments. Small and non-state actors are also becoming ever better equipped in these regards, as well, especially when it comes to smaller, improvised drones.

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The Army is also looking to add directed energy weapons to various units to disable or destroy certain threats, as well as improve its larger, longer-range air defense capabilities. These, along with MHTK and other systems, could potentially get blended together on the same platform for added flexibility against a wide array of targets.

But MHTK's size and low price point could potentially make it, or a system derived from it, attractive both within the Army and to other U.S. military services in other formats. One of the more obvious potential applications would be looking into integrating a truncated version of the Multi-Mission Launcher onto armored platforms that can operate closer to the front lines or even smaller vehicles for more limited missions.

Depending on how quickly the seeker inside the interceptor activates and can acquire its target, it could have some utility against larger, but still low-flying aircraft, such as gunship helicopters. It might be possible to develop a version that is still smaller, lighter, and cheaper than the FIM-92 Stinger missile that would expand the air defense capabilities available to small units. If this is the case, a man-portable type might be another possibility, with active radar guidance leaving tradition infrared countermeasures useless.

In the same vein, the interceptors might be a useful supplement to point-defense systems on ships. The compact nature of the system means that it could potentially fit on almost any size of watercraft to offer additional protection against various threats.

An air-launched MHTK, or derivative, might offer a close-in option for aircraft against incoming missiles or other projectiles, too. In May 2018, the U.S. Navy announced it was interested in acquiring a "hard-kill" defense system to defend various large and increasingly vulnerable cargo and other combat-support aircraft from incoming missiles.

That service, along with the U.S. Marine Corps, has also been investigating potential ways to defend helicopters specifically against rocket-propelled grenades. Northrop Grumman has also already patented its own separate design for just such an active protection system for low-observable aircraft.

Again, a more advanced version may be able to take on more complex aerial targets at close ranges. A small, short-range missile derived from the MHTK could be an especially valuable option for internal carriage on fifth generation multi-role fighter jets, which otherwise have limited space available for self-defense weapons during strike missions that require them to operate in full stealth mode.

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Lockheed Martin has already proposed a conceptual small, hit-to-kill air-to-air missile called Cuda for its F-35 Joint Strike Fighter to help expand how many targets it might be able to engage defensively while remaining as stealthy as possible. These would still be significantly larger than the MHTK interceptors.

Whatever the case, Lockheed Martin and the Army are moving ahead in developing the MHTK for its primary and important role of guarding against incoming indirect attacks and small unmanned aircraft. But hit-to-kill missile technology is clearly a growing field and there is significant potential for designs such as Lockheed Martin's MHTK to take on a wider variety of missions and offer far less expensive and compact options compared to their existing counterparts.



## President Donald Trump just raised the stakes in the fight with China over trade.

The White House said Monday evening that if China goes through with its promise to retaliate against the US tariffs announced last week, the United States will impose tariffs on an additional \$200 billion worth of Chinese goods.

"Further action must be taken to encourage China to change its unfair practices, open its market to United States goods, and accept a more balanced trade relationship with the United States," Trump said in a statement.

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The Trump administration said Friday that it will impose a 25% tariff on \$50 billion of Chinese exports. China, claiming the United States had "launched a trade war," retaliated almost immediately, outlining its own tariffs on US goods worth \$50 billion.

The escalating conflict between the world's two largest economies has rattled markets and companies, which fear disruption to their global supply chains.

The Chinese Commerce Ministry reacted quickly to Trump's announcement, accusing the United States of "extreme pressure and extortionist behavior" and warning it would "strike back hard."

Analysts warned that the risks are growing of an increasingly damaging clash that will ripple around the globe.

"The tit for tat brings the two sides closer to a full-blown trade war," Louis Kuijs, head of Asian economics at research firm Oxford Economics, wrote in a note to clients. "While there is in principle still room for negotiation, attitudes seem to be hardening."

The Trump tariffs, which the US government says are punishment for intellectual property theft, will be enacted in two waves. More than 800 exports, about \$34 billion worth, will be subject to tariffs starting July 6. Another 280 or so still need to undergo a public comment period, and will take effect later.

Trump said Monday that China's response "indicates its determination to keep the United States at a permanent and unfair disadvantage." China's tariffs would target agricultural products, cars and seafood, among other items.

"China apparently has no intention of changing its unfair practices related to the acquisition of American intellectual property and technology," he said. "Rather than altering those practices, it is now threatening United States companies, workers, and farmers who have done nothing wrong."

He directed Trade Representative Robert Lighthizer to identify \$200 billion worth of Chinese goods for additional 10% tariffs, which would be enacted "if China refuses to change its practices, and also if it insists on going forward with the new tariffs that it has recently announced."

In a separate statement, Lighthizer said that he supported Trump's action and that his agency "is preparing the proposed tariffs to offset China's action."

The planned new wave of tariffs would have to go through a similar process of public consultation and comment as the earlier ones before taking effect.

"If the United States loses its senses and comes up with a new list, China will be forced to strike back hard, and launch comprehensive measures that match the US move in quantity and quality," the Chinese Commerce Ministry said in a statement Tuesday.

But Beijing faces challenges in retaliating directly: China ships far more goods to the United States (\$505 billion last year, according to US figures) than come back in the opposite direction (\$130 billion).

To respond to Trump's threat to impose tariffs on as much as \$250 billion worth of Chinese goods, Beijing would have to find other ways to respond.

Analysts say the Chinese government could target trade in services between the two countries rather than physical products. That means things like tourism and education, industries from which the United States benefits a lot more than China does.

Beijing could also seek to make life difficult for big US companies that rely on the Chinese market for a big chunk of their revenue. It showed a willingness to do that to South Korean businesses last year during a period of tension between the two Asian countries.

Top US brands such as Apple (AAPL), GM (GM) and Boeing (BA) generate large amounts of sales in China.

In an interview with CNN earlier this month, Apple CEO Tim Cook said he didn't expect a full-blown trade war to break out and dismissed the notion that iPhones, which are assembled in China, would end up subject to tariffs.

But analysts say it's unclear which government will back down in the confrontation, predicting both economies will be able to withstand the initial waves of tariffs without much impact on overall growth.

"Neither side will be brought to its knees -- which is one reason to think the trade dispute could drag on," research firm Capital Economics said in a note to clients on Friday. "For China's part, its leaders will be determined not to be seen to back down to foreign pressure."

-- Steven Jiang contributed to this report.

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# Comprehensive Analysis of Global Aerospace Foam Market: Latest Trends, Growth, Profitability (2018-2025)

Rory Ethridge — June 16, 2018

Questale has recently published a new research report on Global Aerospace Foam Market. This market research report includes every piece of information regarding to Global Aerospace Foam market sales and revenue, profitability, growth rate, challenges, etc. This research report intends to provide an in-depth analysis of Global Aerospace Foam along with the development trends.

Questale has been serving high quality and well-researched reports to its clients for years now. Apart from simple raw data, we also include graphical illustrations such as graphs, charts, and tables. Questale also provides customized market research for every industry please feel free to connect with us.

## Exclusive Highlights of Global Aerospace Foam Market

Here is a list of all the exclusive highlights from Global Aerospace Foam market research reports:

- Main players in the Global Aerospace Foam and their secret strategies
- Global Aerospace Foam market share, sales and revenue
- Growth Rate & Overall Size of Global Aerospace Foam Market
- Dynamics of Global Aerospace Foam Market 2018-2025
- Emerging geographical regions with huge potential
- Leading manufacturers of Global Aerospace Foam Market 2018-2025
- Uncertain Challenges in Global Aerospace Foam Market
- Categorical collection of products of Global Aerospace Foam Market

To access free sample research report click here –

<https://questale.com/report/global-aerospace-foam-market-research-report-2018/383567>

## Expected Queries for Global Aerospace Foam

Here is a list of all the expected queries that are covered in our Global Aerospace Foam market research report.

- What is the development rate of Global Aerospace Foam market in 2018-2025?
- Who are leading retailers in Global Aerospace Foam Market?

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- What will be the Global Aerospace Foam Market size 2018-2025?
- What are the factors impacting the growth rate of Global Aerospace Foam Market?
- What are the key outcomes of the Global Aerospace Foam market report?
- Who are the leading market players in Global Aerospace Foam along with their secret strategies?
- Which are the best performing regions in Global Aerospace Foam Market 2018-2025?

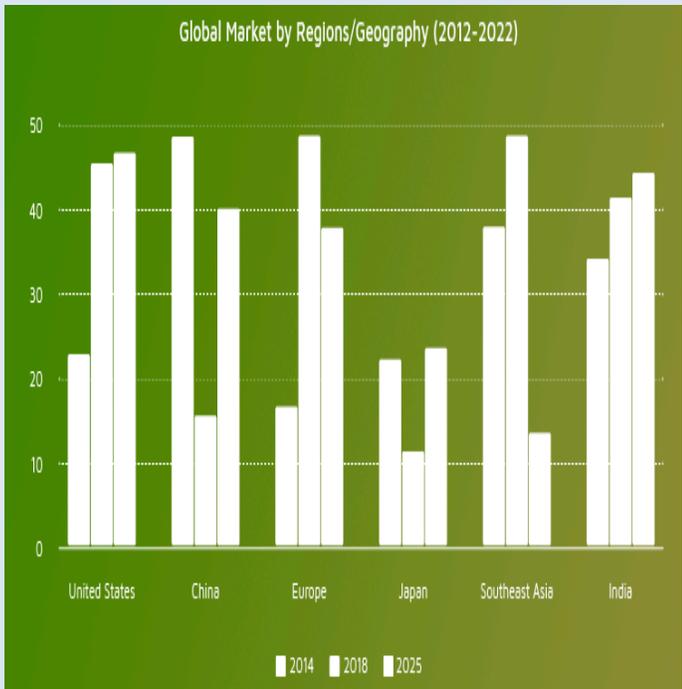
## Top Four Important Parameters of Global Aerospace Foam Market

Here is a list of the top four most important parameters that you should seriously consider before entering Global Aerospace Foam

- Market Players – Market Players can be problematic if you are planning to enter into this market but if you will use our advanced analytics market research reports that includes secret strategies of competitors can help you lead in the market.
  - SABIC
  - BASF
  - Evonik
  - ERG Materials and Aerospace
  - UFP Technologies
  - Rogers
  - Boyd
  - Armacell International
  - Zotefoams
  - Benien Aerospace
- Categories – To save your time and energy, we have already categorized everything into categories and here is a list of the categories:
  - Commercial Aircrafts
  - Military Aircrafts
  - General Aircrafts
  - Application Usage – The usage statistics of the current end user experience can help improve future products.
    - Polyethylene
    - Cross-Linked Polyethylene
    - Polyurethane
    - Reticulated Polyurethane
    - Melamine
    - Specialty Foams
    - Others
  - Geographical Division – This market research report includes all the high performing regions along with their market share, sales and revenue, profitability, etc.
    - North America
    - United States
    - Canada
    - Mexico
    - Asia-Pacific

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- China
- India
- Japan
- South Korea
- Australia
- Indonesia
- Singapore
- Rest of Asia-Pacific
- Europe
- Germany
- France
- Italy
- Spain
- Russia
- Rest of Europe
- Central & South America
- Brazil
- Argentina
- Rest of South America
- Middle East & Africa
- Saudi Arabia
- Turkey
- Rest of Middle East & Africa



**About Questale**

Headquartered in Delaware, Questale is one of the best market research firms providing fact-based insights to Fortune 500 clients including the government, institutions, and multi-national companies. Questale blends the best science, innovative technology, and best business expertise to client’s profitability and accelerate growth.

## Higher Oil Prices Could Cause Aerospace Aftermarket to Slip

By Teresa Rivas June 13, 2018 10:59 a.m. ET

While oil prices have backed off a bit from their recent highs, Canaccord analyst Ken Herbert warns that higher fuel costs could be a "substantial risk" to the commercial aftermarket aerospace stocks--even if we haven't seen any negative impact yet.

Herbert writes that increased oil prices are taking a bite out of airline profits, and that some data suggest this is putting pressure on the aftermarket service providers--although ongoing strong commercial-air-traffic demand is somewhat softening the blow.

After speaking with distributors and manufacturers, he notes that overall aftermarket demand is still strong, but the second quarter will bring more-difficult comparisons. That said, he doesn't think investors should feel overly cautious, as the industry is still seeing parts shortages, a sign of strong demand, and airlines don't appear to be planning to lower capacity as a result of higher crude costs.

Thus, while he sees growing risks to the commercial cycle, as of yet there's "no concrete evidence yet that the cycle is turning."

His preferred stocks for aftermarket exposure are TransDigm Group (TDG), Heico (HEI), and AAR (AIR).

The SPDR S&P Aerospace & Defense ETF (XAR) is down 0.2% to \$89.98 this morning.

## SENATE COMMERCE CMTE MARKUP WOMEN IN AEROSPACE EDUCATION ACT

The Senate Commerce, Science, and Transportation Committee will mark up a long list of bills and several nominations on June 27, 2018 at 10:00 am ET in 106 Dirksen Senate Office Building.

One of the bills is H.R. 4254, the Women in Aerospace Education Act, which passed the House in December 2017.

The committee will also consider the nomination of Karen Dunn Kelley to be Deputy Secretary of Commerce.

Last Updated: Jun 22, 2018 7:02 pm ET

## Newly Unsealed Federal Indictment Charges Iranian Businessman with Illegally Exporting Nuclear Nonproliferation-Controlled Materials from Illinois

CHICAGO — An Iranian businessman schemed with the owner of a European company to illegally export nuclear nonproliferation-controlled materials to Iran from Illinois, according to a newly unsealed federal indictment.

SAEED VALADBAIGI, also known as “Saeed Valad” and “Saeed Baigi,” plotted in 2011 to illegally export U.S.-origin 7075 T6 Aluminum tubing from Illinois to Iran by way of Belgium and Malaysia, the indictment states. The size and type of the aluminum was used in the missile and aerospace industry and was subject to U.S. regulations for nuclear nonproliferation purposes, the indictment states. Valadbaigi’s smuggling plan was part of an effort to evade U.S. laws and export-control regulations, according to the charges.

The eight-count indictment was returned in 2016 in U.S. District Court in Chicago and ordered unsealed Wednesday. It charges Valadbaigi with three counts of wire fraud, two counts of attempting to violate the International Emergency Economic Powers Act, one count of conspiracy to defraud the United States, one count of illegally exporting articles from the United States, and one count of making false statements on a U.S. export form.

Valadbaigi, 56, of Iran, is considered a fugitive. A warrant for his arrest was issued in 2016 and remains outstanding.

The indictment was announced by John R. Lausch, Jr., United States Attorney for the Northern District of Illinois; Jeffrey S. Sallet, Special Agent-in-Charge of the Chicago office of the Federal Bureau of Investigation; James M. Gibbons, Special Agent-in-Charge of the Chicago office of the U.S. Immigration and Customs Enforcement’s Homeland Security Investigations; and Dan Clutch, Special Agent-in-Charge of the U.S. Department of Commerce, Bureau of Industry and Security, Office of Export Enforcement, Chicago Field Office. The government is represented by Assistant U.S. Attorney Rajnath Laud.

In addition to the 7075 Aluminum tubing, the newly unsealed indictment accuses Valadbaigi of illegally exporting titanium sheets from a company in northern Illinois, to Iran, by way of the Republic of Georgia, the United Arab Emirates and Malaysia.

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At the time of that deal in 2009, Valadbaigi controlled various companies in all three of those countries, the indictment states. The charges further allege that Valadbaigi in 2012 ordered acrylic sheets from a company in Connecticut, and falsely claimed that the sheets would be used only in Hong Kong. He later allegedly arranged for the acrylic sheets to be transshipped to Iran.

The public is reminded that an indictment is not evidence of guilt. The defendant is presumed innocent and entitled to a fair trial at which the government has the burden of proving guilt beyond a reasonable doubt. Each count of wire fraud and attempting to violate the IEEPA carries a maximum sentence of 20 years in prison. The illegal export charge is punishable by up to ten years in prison, while the conspiracy and false statement counts are each punishable by up to five years. If convicted, the Court must impose a reasonable sentence under federal statutes and the advisory U.S. Sentencing Guidelines.

The charges against Valadbaigi are part of an investigation that previously resulted in the conviction of NICHOLAS KAIGA, who managed and later owned the Belgium company that did business with Valadbaigi. Kaiga admitted in a plea agreement that he knew the 7075 Aluminum was subject to U.S. export controls and that it could not be exported to Malaysia without a license from the U.S. Department of Commerce, which neither he nor Valadbaigi possessed. Kaiga admitted that he nonetheless used his company, Industrial Metals and Commodities, as an intermediary to export the 7075 Aluminum tubing from a company in northern Illinois, to Belgium and then to Malaysia, on behalf of Valadbaigi. Kaiga pleaded guilty to violating U.S. export-control regulations and was sentenced in 2015 to two years and three months in a U.S. prison.

## Training

Registration is open for a one-day Encryption Seminar in Northern California, following a two-day Complying with U.S. Export Controls seminar. Reserve your space before it fills up! Details below.

■ Complying with U.S. Export Controls – 2 Day  
August 14-15, 2018  
Milpitas, CA  
Registration: \$485

■ Encryption Controls – 1 Day  
August 16, 2018  
Milpitas, CA  
Registration: \$375

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Additional BIS seminars open for registration:

■ Complying with U.S. Export Controls – 2 Day  
July 10-11, 2018  
North Charleston, SC  
Registration: \$455

■ Complying with U.S. Export Controls – 2 Day  
September 12-13, 2018  
Smithfield, RI  
Registration: \$450

■ Complying with U.S. Export Controls – 2 Day  
September 19-20, 2018  
Los Angeles, CA  
Registration: \$500

“Complying with U.S. Export Controls” is a two-day program led by BIS's professional counseling staff and provides an in-depth examination of the Export Administration Regulations (EAR). The program will cover the information exporters need to know to comply with U.S. export control requirements under these regulations. We will focus on what items and activities are subject to the EAR; steps to take to determine the export licensing requirements for your item, how to determine your export control classification number (ECCN), when you can export or reexport without applying for a license, export clearance procedures and record keeping requirements, and real life examples in applying this information. Presenters will conduct a number of "hands-on" exercises that will prepare you to apply the regulations to your own company's export activities.

“Encryption Controls” is a one-day program that will focus on the unique provisions related to encryption under the EAR.

## Boeing To Take Control Of \$4.75B Embraer Unit Via JV

(July 5, 2018, 2:07 PM EDT) -- Chicago-based aviation giant The Boeing Co. agreed to take control of the commercial aircraft and services unit of Brazil's Embraer SA by way of a joint venture in a deal that values the plane maker's commercial aircraft operations at \$4.75 billion, the companies announced on Thursday.

The announcement comes after months of speculation and rumored talks by the companies. Under the deal, Boeing will own 80 percent of the joint venture that encompasses the unit, with Embraer to own the other 20 percent.

## Scientists from the University of Wisconsin-Madison (UWM) have developed a new type of material that can hide an object's heat signature from infrared sensors

The new material doesn't have a name yet, but it's based on so-called "black silicon," a semiconductor material that's used in modern solar cells to trap light and later convert it into heat or electricity.

New material traps around 94% of infrared light  
But while black silicon can trap some infrared light, it does not trap most of it. The UWM research team modified standard black silicon to work better at catching roughly 94 percent of the infrared light that hits its surface.

This keeps infrared light reflecting from other objects from passing through the researchers' black silicon material.

The result is a one millimeter wide —roughly the thickness of 10 paper pages— thin sheet that can be placed over objects and even the human body to shield infrared light being reflected away and picked up by infrared scans.

New material = black silicon + silver  
Researchers created this new black silicon material by modifying the material's surface.

By default, black silicon absorbs light because it consists of millions of microscopic needles (called nanowires) that point upward like a densely-packed forest. Light enters these nanowires and reflects back and forth between the vertical spires, bouncing around within the material instead of reflecting off.

The UWM team modified the structure and height of black silicon's nanowire.

"We didn't completely reinvent the whole process, but we did extend the process to much taller nanowires," says UWM Professor Hongrui Jiang.

Besides making the nanowires taller, they also added silver, a material that helps absorb light in the infrared spectrum.

Optimal for military applications  
The new material is still under development, and its applicability will rely on the ability to mass-produce it.

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"It's a matter of the weight, the cost and ease of use," says Jiang. "

The material's applicability is pretty obvious —the military— where it could be used as infrared shielding for humans and weapons and prevent infrared-based heat signature sensors from picking up troop movements.

"You can intentionally deceive an infrared detector by presenting a false heat signature," says Jiang. "It could conceal a tank by presenting what looks like a simple highway guardrail."

More details are available in the research team's paper, titled "Broadband and Ultrathin Infrared Stealth Sheets."

## Emerging Technologies in Medical Device Connectivity Will Skyrocket the Healthcare Market

PRESS RELEASE PR Newswire  
Jul. 2, 2018, 09:53 AM

Vendor-agnostic solutions that can aid interoperability attract interest from hospitals, finds Frost & Sullivan

SANTA CLARA, Calif., July 2, 2018 /CNW/ -- The wide adoption of electronic medical/health record (EMR/EHR) solutions in hospitals is making a strong case for interoperability among medical devices, and could well take the \$232.5 million global medical device connectivity (MDC) market past the billion-dollar mark by 2022. To make optimal use of EMR/EHR and lower their dependence on manual monitoring, hospitals are developing connectivity strategies based on early warning scores, automated electronic charting, emergency alert and response, virtual intensive care units (ICUs), medical device asset management, and real-time location solutions.

"The current generation of medical devices are local area network(LAN)-aware and has the ability to integrate with any hospital IT systems," said Dinesh Kumar, Transformational Health Industry Analyst. "Medical devices can connect to hospital networks using Internet protocol (IP) technologies of transmission control protocol (TCP)/IP and wide area network (WAN) either directly or through a vendor-supplied gateway."

Frost & Sullivan's recent analysis, Global Hospital-based Medical Device Connectivity Market, Forecast to 2022, examines the competitive landscape covering clinical IT systems vendors, medical device OEMs, vendor-agnostic third-party vendors, and healthcare system integrators.

(\*Continued On The Following Column)

It presents use cases for patient data integration with EHRs, real-time patient monitoring, virtual ICU, centralised patient monitoring, and clinical alarms.

North America emerged the biggest adopter of MDC solutions in 2017, with \$171.8 million of the total revenue. The United States market generated \$153.9 million of those, driven by technology innovation and policies like Meaningful Use (MU), Accountable Care Organisations (ACO), and the hospital readmission reduction programme. The European and Asia-Pacific (APAC) markets too were supported by favourable initiatives like healthcare digitisation and the medical error reduction programme at the point-of-care.

Future growth opportunities in this market include:

- Vendor-agnostic third-party device connectivity solutions such as the CareAware iBus platform from Cerner Corporation and the Accelerio Connect from Iatric Systems;
- Huge demand for end-to-end medical device connectivity solutions such as the Qualcomm Life's SmartLinX, which will enable a multi-disciplinary approach towards achieving a connected healthcare ecosystem;
- The growing shortfall of intensive care workforce is challenging hospitals' ability to care for critically ill patients. Virtual ICU and patient surveillance solutions from Bernoulli Health offers centralized patient monitoring thereby improving overall clinical outcomes in the high-acuity care settings; and
- Healthcare system integrators and interoperability enablers such as Enovacom, Validic and Forcare known for developing and implementing business-specific application interfaces for delivering patient data from disparate sources are gaining significance.

"Next generation connected medical devices will embrace machine-to-machine (M2M) and cloud-based technologies for real time, bi-directional communication required for centralised patient monitoring. For hospitals without EMR solutions, cloud-based device connectivity and digital dashboards for device data visualisation will be an alternative. Furthermore, the growing demand for hospital-based MDC is giving rise to competitive business models and solution offerings from direct and indirect market players," noted Kumar.

Global Hospital-based Medical Device Connectivity Market, Forecast to 2022 is part of Frost & Sullivan's global Connected Health Growth Partnership Service program.

About Frost & Sullivan

For over five decades, Frost & Sullivan has become world-renowned for its role in helping investors, corporate leaders and governments navigate economic changes and identify disruptive technologies, Mega Trends, new business models and companies to action, resulting in a continuous flow of growth opportunities to drive future success.

## Night Vision Devices Market 2018 Global Top Countries- Asia-Pacific, Middle East & Africa, North America, South America and Europe

Fair Columnist - JULY 2, 2018

The global Night Vision Devices market research report records significant aspects related to business constraints and proceedings that cover inventive technological Night Vision Devices progresses, acquisitions, mergers and collaboration, introduction of new product, distinct business statistics of the Night Vision Devices market that has been studied in the history and has to be prepared over the forecast period 2018- 2023. The global Night Vision Devices industry report executes a comprehensive study on the past data, present as well as the upcoming market trends in Night Vision Devices industry and future estimations.

However, the Night Vision Devices market report stands to be explicit in gathering the data that can be viewed by the number of users which include researchers, Night Vision Devices experts, and advisors. Further, the report become more understandable by combining the Night Vision Devices industrial constraint investigation of the market with it. The Night Vision Devices report offers buyers and distributors data of market in addition to the competitive players of Night Vision Devices product includes their production and price structure.

In addition to this, the worldwide Night Vision Devices market serves major top players Elbit Systems, BAE Systems, L3 Technologies, Newcon Optik, Meproflight, Thales, Meopta, FLIR, Thermoteknix, Nivisys, Harris, ITL, Optix, ATN, Schmidt & Bender and SAT Infrared that act as the major participants in growing the volume and revenue of the Night Vision Devices market.

*“Never stop doing your best  
just because someone doesn’t  
give you credit.”*

## INTERNATIONAL SPACE COLLABORATION FOR SECURITY (Aerospace Corp/GWU)

The Aerospace Corporation and the Space Policy Institute at George Washington University (GWU) held an event on July 19, 2018 from 8:00 am – 12:00 pm ET on “International Space Collaboration for Security.” It will take place at GWU’s Elliott School of International Affairs, City View Room, 1957 E Street, NW, Washington, C.

Speakers had not been announced as of June 30, 2018.

About the GWU Space Policy Institute

The SPI focuses its activities on policy, economic, and legal issues related to the space efforts of the United States, as well as the cooperative and competitive interactions in space between the US and other nations. The Institute provides a setting in which scholars, policy analysts, practitioners, and students can work together to examine and evaluate options for the future in space.

Contact us at [spi.elliott.gwu.edu](http://spi.elliott.gwu.edu).

About the Center for Space Policy and Strategy

The Center for Space Policy and Strategy is dedicated to shaping the future by providing nonpartisan research and strategic analysis to decisionmakers. The Center is part of The Aerospace Corporation, a nonprofit organization that advises the government on complex space enterprise and systems engineering problems.

Contact us at [policy@aero.org](mailto:policy@aero.org).

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