Federal Bureau of Investigation
National Security Branch
Weapons of Mass Destruction Directorate • Counterintelligence Division • Directorate of Intelligence

Counterproliferation (FBI - CPC)
CPC Mission = lead the FBI's efforts to identify, deny, disrupt, and exploit attempts to obtain or divert embargoed, export controlled, or otherwise sensitive technologies, or activities related to WMD/CBRNE, missile, delivery system, space or conventional weapons systems or dual-use components to foreign adversaries.

Vision = to prevent the acquisition of WMD and critical controlled technologies by all adversaries.
“EAR” – intended to serve the national security, foreign policy, nonproliferation, and short supply interests of the United States and, in some cases, to carry out its international obligations.
Counterproliferation:
- Mission to disrupt proliferation efforts
- Acquisition of items the USG has determined are to be controlled
  - Controlled by DOC (dual-use)
  - Controlled by ITAR (DDTC)
    - Munitions list (Military)

Economic Espionage
- Mission to disrupt efforts to acquire Proprietary Information
- Information/Technology a private company has determined is to be controlled
Highest priorities are WMD, ballistic missile, and Advanced Conventional Weapons (ACW).

Some items have clear weapons applications and some are dual-use with both civilian and weapons applications.
- For example, triggered spark gaps have a medical application as well as a nuclear weapons application.
Defense Security Service
2013 Targeting US Technologies

Top Targeted Technologies
- Information Systems
- Electronics
- Lasers, Optics, & Sensors
- Aeronautics
- Materials & Processes
- Space Systems
- Positioning, Navigation, & Time
- Marine Systems
- Information Security
- Processing & Manufacturing

Collector Affiliations
- Commercial
- Government
- Government Affiliated
- Unknown
- Individual

Methods of Operation
- Suspicious Network Activity
- Attempted Acquisition of Technology
- Academic Solicitation
- Request for Information
- Solicitation or Marketing Services
- Foreign Visit
- Seeking Employment
- Exploitation of Relationships
- Surveillance
- Criminal Activities
- Search/Seizure

Percentage of Total FY12 Cases (Change From FY11)
- Top Affiliation
- Top Method of Operation
- Top Tech
FPGA (Field Programmable Gate Array) – A super-powerful user-programmable computer processor (Xilinx and Altera)

ADC (Analog to Digital Converter) – Converts analog signals or data such as radio waves and turns it into a digital signal (Analog Devices)
An input/output card is a general purpose hardware unit that is used for different purposes within the Dynamic Positioning (DP) System.

The I/O card is based on FPGA technology, which makes it possible for the I/O card to have different functions based on its configuration.
Dual-Use (FPGAs)

- FPGAs used in space
- Russian Radar
- Russian Phazotron Mig-35 T/R Module
US Built FPGA in the Transmitter/Receiver Module

“Phazotron on the other hand has carved out a niche as the technological innovators in the Russian industry”

Assessing Russia’s First Fighter AESA Technical Report APA-TR-2008-0403
08/31/2012
“China and Russia will remain aggressive and capable collectors of sensitive US economic information and technologies...motivated by the desire to achieve economic, strategic, and military parity with the US.”

- Report to Congress on Foreign Economic Collection and Industrial Espionage, 2009-2011
Under the EAR, the release of technology or source code subject to the EAR to a foreign national in the US is also “deemed” to be an export to the home country of the foreign national and may require a license.

- Visual inspection
- Oral exchanges of information
- Application to situations abroad of personal knowledge or technical experience acquired in the US
March 2013 – Sixing “Steve” Liu
- Convicted on nine of eleven counts
  - Six counts of violating ITAR
- 70 months in prison, 3 years supervised release, $15K fine
- Liu took ITAR-restricted technical data to PRC and also provided presentations on the technology to PRC Universities and Chinese Academy of Sciences
“Foreign government organizations, including intelligence services, use official visits to US Government and cleared defense contractor facilities, as well as joint research projects between foreign and US entities, to target and collect information”

- Report to Congress on Foreign Economic Collection and Industrial Espionage, 2009-2011
Emulation software (Export-Controlled)

The acoustic communication micro-modem technology is a critical component in the operation and control of AUVs; in the case of multiple-AUV systems, it is also essential for navigation.

(U//FOUO) Emulation software is used to test the performance of micro-modem technology within a simulated environment and to reveal performance issues related to acoustic signal processing of the communication network.
**TARGET:** An Oceanographic Institute that has conducted research sponsored by the Office of Naval Research (ONR) to assess the performance of micro-modems in the following scenarios by using the identified emulation software:

- (U) Boat to vehicle
- (U) Boat to Buoy
- (U) Buoy to underwater vehicle
- (U) Buoy to node to underwater vehicle
- (U) Multisystem
Moscow Times Headline: “Why Russia Smuggles US Microelectronics”
Deputy Prime Minister of Defense Dmitry Rogozin’s reaction to BG arrests:

“This is not a serious approach, because Russia will still obtain this technology, if not from the West, then the East, or invent it on our own…”
“Intelligence…aims at supporting the process of modernization of our country and creating the optimal conditions for the development of its science and technology.”

- Mikhail Fradkov,
  Director, SVR, December 2010

SVR Headquarters
FBI, DOC, and NCIS arrested Alexander Fishenko, Alexander Posobilov, Viktoria Klebanova, and 5 others for violations to U.S. Export Law
24 Count Indictment – 11 individuals, 2 companies, 8 arrests, 6 search warrants
Ongoing Blacklist project (~250 manufacturers / resellers)

Indicted 11 ARC and Apex employees

RUSSIAN PROCUREMENT COMPANIES

SHELLS

TRANS-SHIPPERS

PARTS

SHOPPING LISTS

OUTREACH

FINES

ENTITY LIST

RESELLERS

BROKERS

MANUFACTURERS

VIRTUAL BRANCH

Administrative fines $250K / transaction

~100 transactions

Entity listed procurement companies / brokers / shells (~65 companies, 100+ employees)

ongoing Blacklist project

350 manufacturers / resellers

ARRESTS

RUSSIAN GOVT

R&D

RIS

RMOD

U//FOUO
Outreach – Blacklist Project

- ARC was blacklisted by several US companies as early as 2008
- If one of these companies reported their blacklist, BG could have happened sooner
- FBIHO/FBIHQ initiative to reach out to US companies, gather blacklists, and open cases
- Goal is to prevent/dismantle other procurement networks
What will we be facing as a nation?
1) Iran An-140 to be outfitted with Sea Dragon
2) Indian IL-38SD outfitted with Sea Dragon
3) Russian IL-38N with Sea Dragon
4) New Russian BE-200 outfitted with Sea Dragon for export to China.
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