



January 12, 2009

## **Iranian Entities' Illicit Military Procurement Networks<sup>1</sup>**

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On September 17, 2008, the United States District Court of the Southern District of Florida unsealed a federal grand jury indictment against sixteen foreign individuals and companies involved in procuring items with military applications for Iranian entities through Dubai and Malaysia-based trade networks. Those under indictment allegedly violated U.S. law under the International Emergency Economic Powers Act, Iran Trade Embargo, Iranian Transactions Regulations, and relevant executive orders by filing inaccurate export and end user declarations. The Iranian Transactions Regulations in particular prohibit “unauthorized exportation of goods from the United States to a third country if the goods are intended or destined for Iran.”<sup>2</sup> The indicted individuals and entities allegedly circumvented U.S. export controls by utilizing a transnational network of firms located throughout the world to successfully purchase and channel goods to Iran. In each instance of alleged illegal procurement, the shipment of goods was complicated and did not include direct shipment from an American company to Iran.

The dual-use items targeted by the network included electronic components capable of being used to construct Improvised Explosive Devices, or IEDs, according to U.S. allegations. The items, as described in the U.S. indictment, included: field-programmable gate arrays, integrated circuits, Global Positioning Systems (GPS), Field Communicators, and microcontrollers. The same types of items have been found in IEDs in Iraq and Afghanistan.

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<sup>1</sup> See United States District Court, Southern District of Florida, *United States vs. Ali Akbar Yahya, F.N. Yaghmaei, Mayrow General Trading et al., Superseding Indictment*, Case No. 08-20222-CR-LENARD(s), Sept. 11, 2008. Although this case is non-nuclear, its complexity provides valuable insight into Iranian illicit procurement methods that are also used in its illicit nuclear procurements.

<sup>2</sup> *Ibid.*, pp. 5-6.

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One hundred and eight individuals in total were placed on the Bureau of Industry and Security's Entity List on September 22, 2008.<sup>3</sup> The U.S. Department of Commerce imposed export license and transaction requirements on exports by U.S. companies to any of the 108 individuals associated with the alleged Dubai and Malaysia networks also as of September 2008. It had earlier placed sanctions on the core 16 entities and individuals mentioned in the indictment in 2006.

## **Lessons**

This case study, based on allegations contained in the U.S. indictment, illustrates the major problem posed by countries of diversion concern, or states whose companies receive goods that are diverted or re-exported and ultimately utilized by terrorist networks, military programs or unsafeguarded nuclear programs in other countries. The United Arab Emirates (UAE's) port capital of Dubai, for example, functions as one of the world's most unrestrictive free trade and shipping zones. It also houses hundreds of front companies and foreign trading agencies that actively procure dual-use items for entities in countries under sanction. The failure of the UAE, Malaysia, and other governments to implement and enforce tough export control laws against companies located on their territories allows entities in states like Iran to benefit importantly from onward proliferation.

This case study also demonstrates that the strict export control system of the United States remains susceptible to exploitation by transshipment schemes. It is difficult for manufacturers and suppliers to know when they are being exploited by these sophisticated procurement networks. The alleged successes of the Dubai and Malaysia-based networks in obtaining the items show that U.S. companies often are unable to detect illicit procurement schemes on their own. Though the entities involved in this illicit procurement scheme allegedly purchased items which could be used in conventional weapons, a network using similar strategies to procure a range of dual-use items for use in an unsafeguarded nuclear program would likely have found a similar level of success. Iran's efforts to procure for its nuclear program, particularly its gas centrifuge program, are similar in their complexity and difficulty in discovering.

## **The Mayrow Case**

Starting in at least January 2004, two primary individuals residing in Dubai allegedly began facilitating the export of military-usable electronic components and other items from the United States to Iran by way of associated companies in the UAE, Malaysia, Singapore, Germany, and Great Britain. Some of the items allegedly procured were controlled under dual-use export restrictions because they could have application in a nuclear or military program. The following descriptions of the actions of individuals and companies associated with the Dubai and Malaysia-based networks are based on allegations contained in the U.S. indictment. Those under indictment have not yet been tried in court nor found guilty of any of these allegations.

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<sup>3</sup> "Rules and Regulations," *Federal Register*, Vol. 73, No. 184, Monday, Sept. 22, 2008.

## The Dubai Network

The individuals allegedly responsible for operation of the Dubai-based network are accused of lying on U.S. end user declaration documents for items, which allegedly went to entities in Iran in violation of the U.S. embargo. Two chief executives of the import-export agency Mayrow General Trading Company, located in Dubai, allegedly utilized this company as the anchor of the Dubai and Malaysia-based illicit trade networks. These individuals, one indicated in the indictment to be of Iranian birth, allegedly held managerial or associate roles at other UAE-based companies in the network. These companies included Atlinx Electronics, Micatic General Trading, and Majidco Micro Electronics. Iranian companies named in the U.S. indictment that received items include Toos Electronics and Neda Industrial Group. Neda Industrial Group had offices in Dubai and Tehran. Additional companies or entities located in Iran may have been part of the Mayrow scheme, but they are not specified by name in the U.S. indictment.

Under the Dubai operation, 18 alleged cases of illicit trade occurred or were attempted. In some cases, the U.S. indictment is unclear about whether items successfully reached Iran.

Figure 1 describes the flow of orders that are alleged to have come from Iran through the network to U.S. suppliers. The trading companies effectively created a wall between the Iranian entities and the U.S. suppliers, making it difficult for the U.S. suppliers to identify the true end user of an item. In Dubai, four companies, all with the same address and managed by the same two managers, placed most of the orders. This strategy of dividing up the orders reduced the “signature” of each trading company to prying authorities and potential suppliers, increasing their chance of success. The shipment routes of the ordered items are not described in this figure; however, the shipment routes of the orders were also designed to hide the true end user.

Allegedly, the two primary individuals responsible for operating the Dubai network often sent purchase orders to U.S. companies requesting electronic items for Majidco, Micatic, and Mayrow, and then facilitated payment for the items through Mayrow and other companies. Allegedly, companies Majidco, Micatic, and Atlinx also directly purchased items from the United States. The two individuals and their associates allegedly colluded to obscure the identity of the final end user from U.S. export authorities by falsifying export documents. According to the U.S. indictment, once the items were exported to the UAE entities, they were then diverted or re-exported to the Neda Industrial Group in Tehran or to other Iranian companies.

Four of the more complex instances of illicit trade in dual-use items facilitated by the Dubai network follow, as based on U.S. allegations.<sup>4</sup>

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<sup>4</sup> A full description of all overt acts of the Dubai network is found in U.S. District Court, *Mayrow General Trading et al., Indictment*, Sept. 11, 2008, pp. 13-23.

In January 2004, Majidco allegedly placed an order for 7,500 Microchip brand microcontrollers through the Amsterdam, Netherlands subsidiary of a Chandler, Arizona company. Upon receipt of the items, Majidco allegedly diverted or re-exported them to the Neda Industrial Group. This same Arizona company's Dublin-based subsidiary was likely targeted for an additional 5,000 microcontrollers in July 2004, which were also sent to Neda Industrial Group. Another case, occurring also in January 2004, allegedly involved an unnamed individual who brokered for Atlinx the export of 120 field-programmable gate arrays from a Mountain View, California company using a phony end-user statement that claimed the shipment would ultimately go to Heliopolis, Egypt. In February, the items were allegedly exported to Atlinx, and in March, they were received by an unspecified company located in Iran. According to the allegations, in May 2006 Mayrow also arranged for the export of Invensys Model 375 Field Communicators from a Foxboro, Massachusetts company to a company called Telectron, located in Abu Dhabi, UAE. Later that month, an unnamed entity in Iran allegedly received these items.

Twelve similar procurements relying on phony end user declarations led to a total of eighteen alleged instances of successful or attempted illicit trade by Mayrow and its UAE affiliates through the end of 2006. A complete list and timeline of all the Dubai network cases appears in Table 1. Iran appears to have used trading companies to develop successful procurement paths, and then abandoned or modified these paths when they were no longer successful or were in danger of being exposed.

## **The Malaysia Network**

Beginning in at least October 2006, Mayrow General Trading Company in Dubai and its affiliates based in Malaysia allegedly began to procure items from U.S. companies. These items were allegedly exported from the United States to British, German, and Singaporean companies before being diverted or re-exported to Iran in violation of the U.S. embargo. A company in Malaysia called Vast Solution was allegedly the anchor of the Malaysia-based network, and its associates had ties to Mayrow and other UAE companies, according to the indictment. Vast Solution was allegedly operated by an Iranian citizen living in Malaysia.

Under the Malaysia operation, 13 alleged cases of illicit trade occurred or were attempted. In some cases, the U.S. indictment is again unclear about whether items successfully reached Iran.

Figure 2 describes the flow of orders through the Malaysia network. Many of the paths are intricate and hard to trace, involving several trading companies on different continents. In one case, an order allegedly went from Iran to Mayrow in Dubai, and then to a company in Malaysia, which placed the order with a U.S. supplier. A different trading company in Dubai made payment to the Malaysian company for this order, which likely went to Iran.

In March 2005, the United States reportedly learned of Mayrow's activities and started pressuring the UAE government to stop this company. The UAE resisted U.S. efforts.<sup>5</sup> Finally, in March 2007, the UAE government shut down Mayrow General Trading Company. Table 2, a list and timeline of alleged procurements by the Malaysia network listed in the indictment, shows no involvement by Mayrow in the Malaysia network after February 2007. This table and the dates of the orders show that Vast Solution's role in the network grew after Mayrow was closed. The Malaysian network appears to have gradually replaced the Dubai network entirely.

Five of the more complex instances of illicit trade carried out by the Malaysia network follow, as based on U.S. allegations.<sup>6</sup>

One instance of illicit trade in dual-use items allegedly occurred in December 2006 when Al-Faris, a company located in Dubai, placed an order for 1,000 Harris brand integrated circuits with a Deerfield Beach, Florida company. The circuits were allegedly exported in January 2007 to Vast Solution in Malaysia. Upon receiving the circuitry shipment, Vast Solution allegedly used Iran Air to deliver the items to an unnamed entity in Iran. A purchasing associate of this Iranian entity later allegedly requested an additional 2,000 units from Mayrow. Al-Faris allegedly handled placement of a new purchase order to the Florida company and subsequently transferred payment to this company. In March 2007, the goods were allegedly received by Vast Solution. The indictment does not indicate whether the goods were received by an entity in Iran.

February 2007 allegedly marked the beginning of a contractual relationship between an Iranian company called Toos Electronics and Vast Solution for the purchase and shipment of items. In February 2007, a chief executive of Toos Electronics allegedly sent an inquiry to a Linden, New Jersey company requesting information on the price of eighteen EZ-Tilt 5000 inclinometers, on behalf of Vast Solution in Malaysia. According to allegations, the executive used an alias for this inquiry. The executive allegedly instructed an executive of Vast Solution in an e-mail to claim to U.S. export authorities that the end user of the items was the Department of Electrical Engineering of the Faculty of Engineering at the University of Malaysia, and told this executive, "of course you can use any other company as end-user that you think is better than this." The executive at Toos Electronics allegedly signed and sent a purchase order under an alias for nine inclinometers on behalf of Vast Solution in March 2007. The ultimate end user was allegedly claimed to be the University of Malaysia. In April 2007, Toos Electronics allegedly paid for the items via wire transfer and the items were exported by the New Jersey company to Vast Solution. The executive at Toos Electronics then allegedly sent Vast Solution instructions for shipping the inclinometers to Iran.

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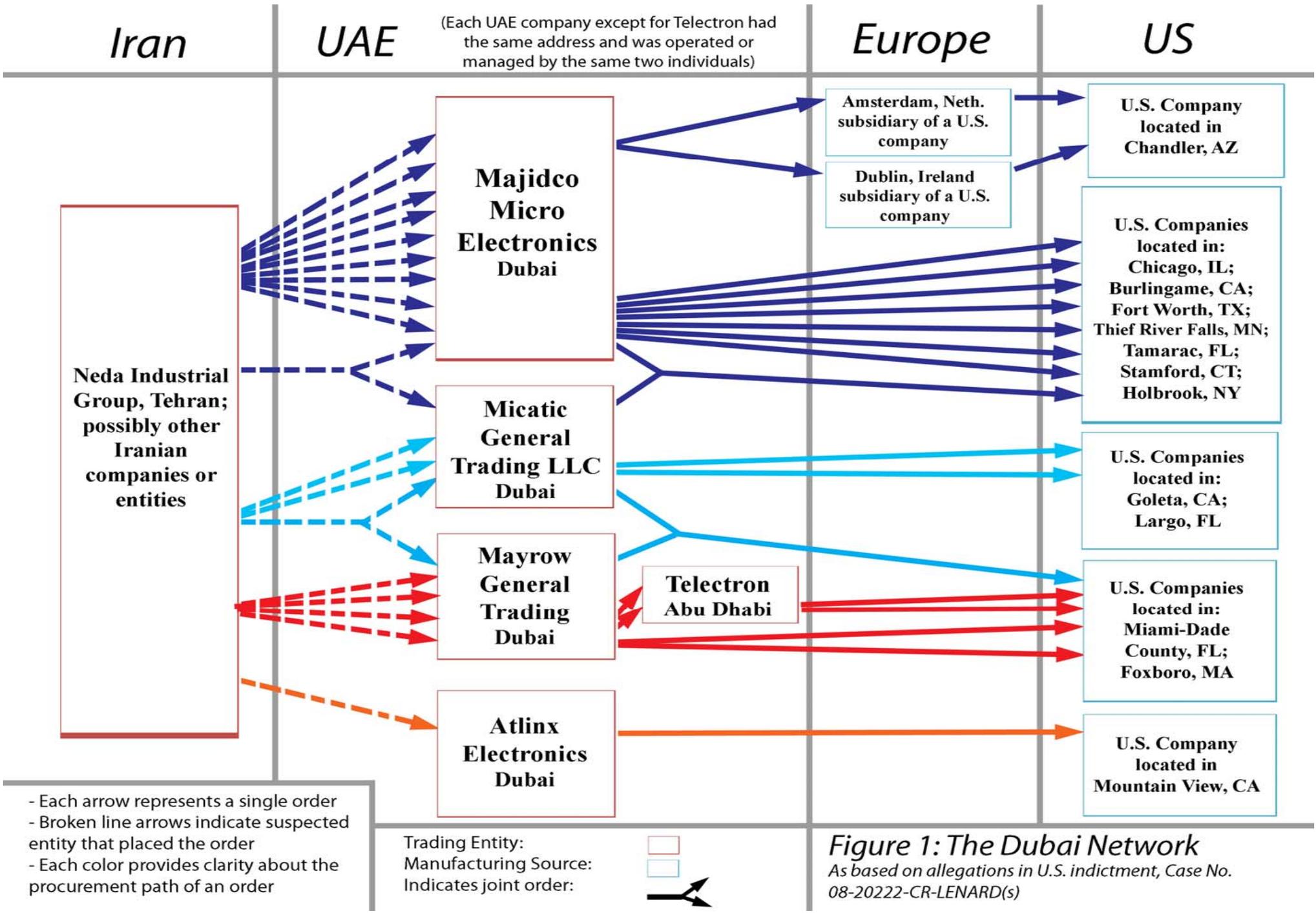
<sup>5</sup> Eric Lipton, "[U.S. Alarmed as Some Exports Veer Off Course](#)," *New York Times*, April 2, 2008.

<sup>6</sup> A full description of all overt acts of the Malaysia network is found in U.S. District Court, *Mayrow General Trading et al., Indictment*, Sept. 11, 2008, pp. 29-41.

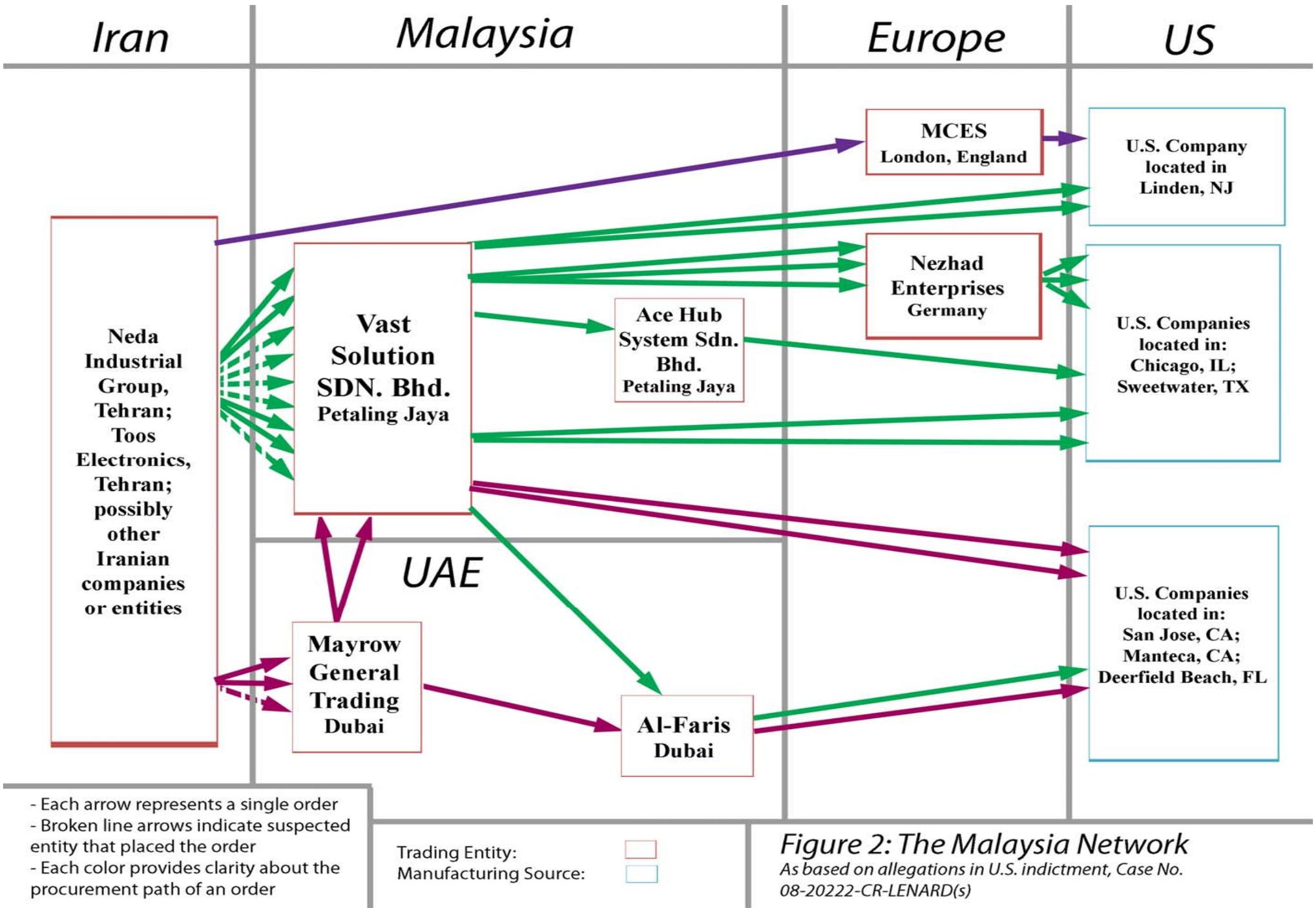
In September 2007, an Iranian citizen living in Great Britain allegedly arranged the export of four EZ-Tilt 5000 inclinometers from the same Linden, New Jersey company. This individual was a chief executive of a company called MCES, located in Great Britain, and was allegedly acting at the behest of Toos Electronics in Iran. The executive at Toos Electronics allegedly instructed the executive at MCES to claim on the U.S. end user declaration that the University of Manchester in England was the ultimate consignee of the items. In October 2007, the executive at MCES allegedly passed to the New Jersey company this false end user information. MCES allegedly handled payment of the inclinometers via wire transfer and the items were shipped to MCES in Britain. The executive at Toos Electronics allegedly then sent instructions for shipment of the items to Iran.

In May 2007, the executive at Vast Solution allegedly sent a purchase order under another alias to a Chicago, Illinois company for 211 radio control devices and accessories. This individual allegedly claimed that the ultimate end user of the items was Cyberinn (S) PTE Ltd. in Singapore. Cyberinn allegedly received the shipment of the devices and accessories and then sent an invoice to Vast Solution for the order. Cyberinn then allegedly organized shipment of the order, at Vast Solution's instruction, to an Iranian entity via Iran Air. The indictment does not indicate which Iranian entity received the shipment, but it alleges that the Vast Solution executive emailed a manager at Toos Electronics in Iran copies of the shipping documents.

Eight similar procurements relying on phony end user declarations led to a total of thirteen alleged instances of successful or attempted illicit trade by Mayrow's Malaysia-based affiliates through early 2008. Again, the U.S. indictment is unclear about whether all the items reached Iran. These procurements are listed in Table 2.



**Figure 1: The Dubai Network**  
 As based on allegations in U.S. indictment, Case No. 08-20222-CR-LENARD(s)



**Figure 2: The Malaysia Network**  
As based on allegations in U.S. indictment, Case No. 08-20222-CR-LENARD(s)

**TABLE 1: DUBAI NETWORK – TIMELINE OF ALLEGED PROCUREMENTS**

Date of order placement or purchase (on or about)	Trading company	Intermediary company or entity	Intermediary company or entity	United States supplier location	Item(s) procured	Iranian recipient	Date received (on or about)
January 14, 2004	Majidco Micro Electronics (Dubai)	Amsterdam, Netherlands office of Chandler, AZ company	-	Chandler, AZ	7500 Microchip brand microcontrollers	Neda Industrial Group (Tehran)	May 31, 2004
January 21, 2004	Atlinx Electronics (Dubai)	-	-	Mountain View, CA	120 field-programmable gate arrays	Unknown Iranian entity <b>(claimed end user: located in Heliopolis, Egypt)</b>	March 9, 2004
March 14, 2004	Majidco Micro Electronics (Dubai)	-	-	Chicago, IL	89 Motorola computer chips	Neda Industrial Group (Tehran)	April 17, 2004
March 15, 2004	Majidco Micro Electronics (Dubai)	-	-	Burlingame, CA	2000 MHS microprocessors	Neda Industrial Group (Tehran) <b>(claimed end user: Majidco)</b>	April 1, 2004
March 17, 2004	Majidco Micro Electronics (Dubai)	-	-	Burlingame, CA	2000 Texas Instruments quadruple differential line drivers	Neda Industrial Group (Tehran) <b>(claimed end user: Majidco)</b>	<b>(Shipped with the above shipment)</b>
April 6, 2004	Majidco Micro Electronics (Dubai)	-	-	Tamarac, FL	497 Vishay brand resistors	Unknown Iranian entity	May 16, 2004 (356 resistors received)
April 14, 2004	Majidco Micro Electronics (Dubai)	-	-	Stamford, CT	Microwave Solutions high powered amplifier	Unknown Iranian entity	October 6, 2004
May 1, 2004	Majidco Micro Electronics (Dubai)	-	-	Forth Worth, TX	200 Ericsson DC/DC converters	Neda Industrial Group (Tehran)	May 17, 2004

May 18, 2004	Majidco Micro Electronics (Dubai) and Micatic General Trading LLC (Dubai)	-	-	Holbrook, NY	3300 pieces, six types integrated circuits	Neda Industrial Group (Tehran) (claimed end user: Majidco)	June 14, 2004
June 14, 2004	Majidco Micro Electronics (Dubai)	-	-	Thief River Falls, MN	1778 Microchip brand microcontrollers	Neda Industrial Group (Tehran) (claimed end user: Al-Arjas Company, Dubai)	July 19, 2004 (1717 micro-controllers received)
July 29, 2004	Majidco Micro Electronics (Dubai)	Dublin, Ireland office of Chandler, AZ company	-	Chandler, AZ	5000 Microchip brand microcontrollers	Neda Industrial Group (Tehran)	October 11, 2004 (1000 micro-controllers received)
(same order as above)	Majidco Micro Electronics (Dubai)	Dublin, Ireland office of Chandler, AZ company	-	Chandler, AZ	(same order as above)	Neda Industrial Group (Tehran)	November 6, 2004 (1000 micro-controllers received)
August 11, 2004	Micatic General Trading LLC (Dubai) (Majidco informed the U.S. company its name had changed to Micatic)	-	-	Goleta, CA	2 low profile incremental encoders	Neda Industrial Group (Tehran)	October 11, 2004
November 13, 2004	Micatic General Trading LLC (Dubai)	-	-	Largo, FL	3400 low pass filters	Neda Industrial Group (Tehran) (claimed end user: Micatic)	December 20, 2004

<b>July 15, 2005</b>	Mayrow General Trading (Dubai) and Micatic General Trading LLC (Dubai)	-	-	Miami-Dade County, FL	GPS units and other items	Unknown Iranian entity (claimed end user: Mayrow)	January 2006
<b>November 2005</b>	Mayrow General Trading (Dubai)	-	-	Miami-Dade County, FL	36 “dummy” GPS units	Unknown Iranian entity (claimed end user: Mayrow)	December 6, 2005
<b>November 2005</b>	Mayrow General Trading (Dubai)	-	-	Miami-Dade County, FL	40 GPS units	Unknown Iranian entity (claimed end user: Mayrow)	December 6, 2005
<b>May 9, 2006</b>	Mayrow General Trading (Dubai)	Telectron (Abu Dhabi)	-	Foxboro, MA	Invensys Model 375 field communicators	Unknown Iranian entity	May 27, 2006
<b>November 4, 2006</b>	Mayrow General Trading (Dubai)	Telectron (Abu Dhabi)	-	Foxboro, MA	5 pneumatic indicating controllers	Unknown Iranian entity	November 15, 2006 (unclear if shipment of 4 pneumatic controllers successfully arrived in Iran)

**TABLE 2: MALAYSIA NETWORK – TIMELINE OF ALLEGED PROCUREMENTS**

Date of order placement or purchase (on or about)	Trading company	Intermediary company or entity	Intermediary company or entity	United States supplier location	Item(s) procured	Iranian recipient	Date received (on or about)
November 26, 2006	Mayrow General Trading (Dubai)	Vast Solution (Malaysia)	-	San Jose, CA	10 microwave isolators	Neda Industrials (Tehran) (claimed end user: Antcorp System Sdn Bhd, Malaysia)	May or June 2007 (unclear if shipment successfully arrived in Iran)
December 18, 2006	Vast Solution (Malaysia)	Al-Faris (Dubai)	-	Deerfield Beach, FL	1000 Harris brand integrated circuits	Unknown Iranian entity	January 17, 2007
February 1, 2007	Mayrow General Trading (Dubai)	Vast Solution (Malaysia)	-	Manteca, CA	60 microwave isolators	Neda Industrials (Tehran) (claimed end user: Antcorp System Sdn Bhd, Malaysia)	May or June 2007 (unclear if shipment successfully arrived in Iran)
February 7, 2007	Mayrow General Trading Company (Dubai)	Vast Solution (Malaysia)	Al-Faris (Dubai)	Deerfield Beach, FL	2000 Harris brand integrated circuits	Unknown Iranian entity	March 1, 2007 (unclear if shipment successfully arrived in Iran)
March 16, 2007	Vast Solution (Malaysia)	-	-	Linden, NJ	9 EZ-Tilt 5000 inclinometers	Toos Electronics (Tehran) (claimed end user: University of Malaysia)	April 10, 2007
May 14, 2007	Vast Solution (Malaysia)	-	-	Linden, NJ	12 EZ-Tilt 5000 inclinometers	Toos Electronics (Tehran) (claimed end user: University of Malaysia)	May 2007 (unclear if shipment successfully arrived in Iran due to recall)

May 15, 2007	Vast Solution (Malaysia)	-	-	Chicago, IL	211 radio control devices and accessories	Toos Electronics (Tehran) (claimed end user: Cyberinn (S) Pte. Ltd. (Singapore))	June 4, 2007
?	Vast Solution (Malaysia)	-	-	Chicago, IL	1 radio control device	Toos Electronics (Tehran)	June 18, 2007
September 20, 2007	MCES (Great Britain)	-	-	Linden, NJ	4 EZ-Tilt 5000 inclinometers	Toos Electronics (Tehran) (claimed end user: University of Manchester, England)	October 8, 2007 (unclear if shipment successfully arrived in Iran)
December 3, 2007	Vast Solution (Malaysia)	Ace Hub System Sdn Bhd (Malaysia)	-	Sweetwater, TX	Scintillation paint	Unknown Iranian entity (claimed end user: University of Malaysia)	March 6, 2008 (unclear if shipment successfully arrived in Iran)
December 26, 2007	Vast Solution (Malaysia)	Nezhad Enterprises (Germany)	-	Chicago, IL	Temperature and humidity control devices	Unknown Iranian entity	January 11, 2008
December 28, 2007	Vast Solution (Malaysia)	Nezhad Enterprises (Germany)	-	Chicago, IL	4 water valve devices	Unknown Iranian entity	January 26, 2008
January 30, 2008	Vast Solution (Malaysia)	Nezhad Enterprises (Germany)	-	Chicago, IL	2 pressure regulator devices	Unknown Iranian entity	February 13, 2008