Information Technology
(U.S. Air Force)

Outlook

- Forecast International projects that the U.S. Air Force will spend over $324 million on its Information Technology project in the coming years

- FI expects funding for the USAF's Information Technology project to remain solid over the next five fiscal years

- In FY09, look for the project to finish developing algorithms for next-generation information technologies

Funding Forecast 2009-2018

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
US$M	32.56	29.14	30.99	37.40	39.56	35.00	30.00	30.00	30.00	30.00
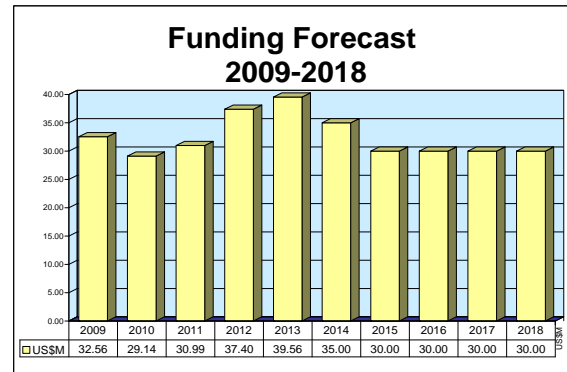
Orientation

Description. The U.S. Air Force's Information Technology project develops technologies that improve and automate the capability to generate, process, and interpret information and disseminate it in a timely and accurate manner to the Air Force warfighter.

Sponsor

U.S. Air Force Research Laboratory
  Griffiss AFB
  Rome, NY
  USA

Status. Ongoing research and development.

Application. Technology development.

Contractors

Contractor(s) not selected or not disclosed.

Technical Data

Information Technology (U.S. Air Force)

Program Element 0602702F, Project 4594.
PE#0602702F is involved in developing the technology
base for USAF command, control, and communications.
The goal of this program element is to increase the
readiness of the USAF warfighter by providing the right
information at the right time anywhere in the world.
PE#0602702F comprises Project 4594, the Information
Technology project.

The Information Technology project provides for the
development of technologies that improve and automate
the capability of the USAF to exploit, fuse, generate,
process, and interpret information and disseminate it in
a timely and accurate manner to the warfighter. Some
of the technologies developed under Project 4594
include:

- Multisensor technology

- Multimedia technology

- Information extraction technology

- Petaflop processing technologies

- Modeling and simulation technologies

- Information exploitation technology

Additionally, the Information Technology project
develops "high-payoff" embedded information systems
technologies for the next generation of distributed
information integration architectures to enable global
information dominance and air and space superiority.
The embedded information systems technologies
provide affordable, innovative, secure, net-enabled,
embedded information systems to the warfighter.

Information Technology is a project of the U.S. Air Force.

Source: Public Domain

Program Review

Enabling U.S. Warfighters to Understand Military Situations

Project 4594 develops technologies that improve global
awareness, enabling U.S. Air Force warfighters to
understand military situations with the precision needed
to accomplish their missions.

In FY01, Project 4594 worked on developing
multisensor, multimedia, analytical techniques to
automatically detect and track the presence and location
of objects. In FY02, the project developed information-
hiding and digital watermarking techniques to protect
and authenticate data within U.S. Air Force and

Department of Defense information systems.   The
project also sought to develop and evaluate detecting
and decoding techniques for use in data embedding,
tamper detection and proofing, image and video content
authentication, and secure information dissemination.

In FY03, Project 4594 worked on developing modeling
and simulation technologies to support next-generation
planning, execution, and assessment environments.
Also, the project developed model abstraction and
multiresolution modeling techniques to reduce the
complexity of existing high-resolution models.

In FY04, Project 4594 sought techniques that would
allow the quantitative evaluation of fusion algorithms

that support the analysis of a new emerging information era. At the same time, the project continued to develop and evaluate fusion technologies for enemy threat prediction.

Preparing for the Future of the Information Era

In FY05, Project 4594 worked on developing better ways to extract information in order to decrease the amount of time required for analysis and decision-making and, according to the U.S. Air Force program element, enable "the ability to populate knowledge base systems." In a separate effort, the project worked on developing data mining techniques for what are referred to as self-organizing data repositories.

In FY06, Project 4594 continued developing and evaluating fusion techniques for optimal fusion management. The project also began development of next-generation, high-performance computers for quantum computing.

Developing Intelligence, Surveillance, & Reconnaissance 'Management Techniques'

In FY07, Project 4594 continued to develop intelligence, surveillance, and reconnaissance management techniques. These techniques will optimize the fusion process for identifying and tracking militarily significant threats. Also, the project evaluated network-centric approaches to providing distributed fusion techniques to the U.S. warfighter.

In FY08, Project 4594 continued its work enhancing Web-based search techniques, data filtering techniques, and information aggregation methods to take advantage of the open source data available on the Web required for "rapid situational awareness." Look for this work to be completed in FY09. Also, the project continued to develop algorithms for next-generation information technologies to be applied to command and control (C^2) systems. Look for this work to be completed in FY09 as well.

In other work in FY09, the project will complete the development and characterization of high-performance computers for quantum computing applications. Also, the project will complete demonstrations of adversarial behavior models and modeling techniques.

Funding

	U.S. FUNDING							
	FY07 QTY	FY07 AMT	FY08 QTY	FY08 AMT	FY09 QTY	FY09 AMT	FY10 QTY	FY10 AMT
RDT&E (U.S. Air Force) PE#0602702F								
Project 4594	-	32.95	-	31.95	-	32.56		29.14

	FY11 QTY	FY11 AMT	FY12 QTY	FY12 AMT	FY13 QTY	FY13 AMT
RDT&E (U.S. Air Force) PE#0602702F						
Project 4594	-	30.99	`	37.40	-	39.56

All $ are in millions.

Source: U.S. Air Force Fiscal Year 09 RDT&E Budget Document

Contracts/Orders & Options

No contract information regarding the Information Technology project has been made public. Consequently, no recent contracts have been identified.

Timetable

Year	Major Development

Information Technology (U.S. Air Force)

Year	Major Development
FY01	Project 4594 develops techniques to automatically detect/track presence/location of objects
FY02	Project 4594 develops teraflop processing technologies for real-time information exploitation
FY03	Project 4594 creates modeling and simulation technologies to support next-generation planning, execution, and assessment environments
FY04	Project 4594 establishes higher-level fusion technologies to achieve situational awareness at all command levels for the dynamic planning and execution process
FY05	Project 4594 develops ways to better extract information
FY06	Project 4594 develops and evaluates fusion techniques
FY07	Project 4594 evaluates network-centric approaches to providing distributed fusion techniques to the U.S. warfighter
FY08	Project 4594 continues developing algorithms for next-generation information technologies for command and control systems
FY09	Project 4594 to complete development of high-performance computers for quantum computing applications

Worldwide Distribution/Inventories

Information Technology is a **U.S. Air Force** project.

Forecast Rationale

The U.S. Air Force's Information Technology project develops technologies that improve and automate the capability to generate, process, and interpret information and disseminate it in a timely and accurate manner to the. Air Force warfighter.

As indicated by the **Ten-Year Outlook** chart, Forecast International estimates that the U.S. Air Force will spend some $324.65 million on its Information Technology project over the next 10 years. The Air Force's desire to enhance its capability to process and distribute information to the U.S. warfighter is driving project funding.

The Information Technology project will help the USAF achieve information dominance over U.S. adversaries. It will provide the Air Force with technologies that enhance and automate the service's capability to produce, process, manage, fuse (combine), exploit, interpret, and distribute timely and accurate information.

FI expects funding for the Air Force's Information Technology project to remain healthy over the next five fiscal years, averaging almost $34 million per year. That said, the projected funding stream for the program may be modified once the new presidential administration takes office.

Ten-Year Outlook

ESTIMATED CALENDAR YEAR RDT&E FUNDING (in millions $)												
Designation or Program		**High Confidence**				**Good Confidence**			**Speculative**			
	Thru 2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**Total**
MFR Varies												
INFORMATION TECHNOLOGY (USAF) Military <> United States <> Air Force												
	369.83	32.56	29.14	30.99	37.40	39.56	35.00	30.00	30.00	30.00	30.00	324.65
Total	369.83	32.56	29.14	30.99	37.40	39.56	35.00	30.00	30.00	30.00	30.00	324.65