ATILA - Archived 12/98

Outlook

- Combat-proven system

- Approximately 235 systems produced through 1996

- No further production predicted

- THIS REPORT WILL BE DROPPED NEXT YEAR, 1998

10 Year Unit Production Forecast
1997 - 2006

No Production Forecast

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
	0	0	0	0	0	0	0	0	0	0

Years
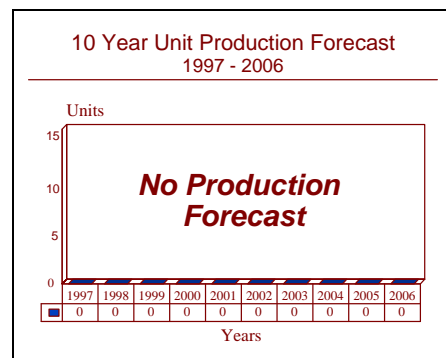
Orientation

Description. Artillery target acquisition, data transmission and fire-control system providing semi-automatic data processing for artillery target location, discrimination, engagement and fire coordination.

Sponsor

Direction Centrale du Material de l'Armee de Terre (DCMAT)

    27 Boulevard de Stalingrad
    PO Box 164
    F-92240 Malakoff
    France
    Tel: +331 4657 1137

Contractors

Thomson-CSF
    Division CIMSA SINTRA
    10-12 Avenue de l'Europe
    F-78140 Velizy
    France

Licensee. No production licenses are known to have been granted.

Status. In service.

Total Produced. Approximately 235 produced through 1996. No further production of ATILA anticipated.

Application. ATILA is tasked with computing ballistic data, taking into account: topography; meteorological conditions; sizes and locations of targets and location of gun batteries; the transmission of communications between forward observers to command posts and the relaying of firing data to guns, to provide intercommand post links for data exchange; and to assist in tactical decision making by storage of tactical situations in computer memory.

Price Range. An ATIBA unit costs approximately US$1.1 million with the Fire Central costing another US$1.1 million. A full ATILA system thus costs between US$5.5 million and US$7.7 million depending on configuration.

Technical Data

Characteristics
Observers: Up to 36 positions

Recorded targets:	500
Recorded fire plans:	4
Safety zones:	40
Registration points:	20
System transmission time/message:	1 second
Battery reaction time:	15 second
Battalion reaction time:	35 second

Design Features. The ATILA system is organized around two types of post. First is the Fire Centre Vehicle or Post (FCV/FCP) containing the computer which executes the fire calculation functions. The second is the command vehicle or post for the relevant fire unit commander which acts as the tactical center. Linked to these elements are the artillery observers, equipped with artillery tactical terminals (ATT), who send their fire requests, fire adjustments, and intelligence messages via radio link; and the guns which receive the computer-generated fire data on a remote display unit. Automatic digital data links ensure the reliable and rapid exchange of data between these various elements using modems and standard radio sets.

The ATIBA battery-firing system provides for the control of up to eight guns of any caliber, and performs firing calculations for each gun using data provided by the central ATILA command unit and by up to 10 forward observation posts, ballistic data, and standard meteorological input. The system also provides related functions such as survey calculations and mobile target engagement.

ATIBA comprises a central processor and control unit, which can be installed in any type of vehicle, up to eight gun display units located at each gun position, and a 1200-baud radio link connecting the central battery unit to the gun display units. The central processor is based on a CIMSA SINTRA military computer and performs the following functions: (a) calculation of firing data for each gun, (b) processing of point and linear targets with regard to the best distribution of shells on the target and the number of rounds required for possible mixes of ammunition types, (c) fire adjustment, (d) determination of firing corrections, and (e) dividing the battery into two troops for separate target engagement.

The input data at the battery unit is aided by grids displayed on the screen which lists the parameters required appropriate to the functions selected. A check is made to alert the operator to any possible errors. Data are input by keyboard as are fire requests, correction and gun status. Up to six ATIBAs can be grouped with the central command unit to form the full ATILA system.

Variants/Upgrades

With the introduction of MLRS into French Army service, improvements to the ATILA system became essential. Three MLRS battalions are presently entering service, one for each corps. The MLRS battalions are linked to RATAC radar surveillance systems. The upgraded system is known as ATLAS and will be mounted in dedicated AMX-10 or VAB vehicles which will communicate directly between the surveillance systems and the artillery batteries. Communication will be by PR-4G type frequency-hopping tactical radios.

A version of ATILA, known as Palmier, has been supplied to Saudi Arabia for direction of the French-built GIAT-GCT and US M-109 155 millimeter self-propelled guns. This version has also been supplied to the UAE and is a simplified ATILA with reduced centralization. Force analysis would indicate that a total of 30 systems were supplied to Saudi Arabia and four to the UAE.

Program Review

Background. Initial studies on the ATILA system were started in the early 1970s with the prototypes being delivered in 1978. Following service trials, the French Army started to receive production ATILA units in 1980. Ten of the 16 regiments scheduled to receive ATILA had been equipped by early 1985 with the remaining six receiving their systems by the end of 1986.

In mid-1983 CIMSA unveiled a new version of the ATILA, ATILA II. This is configured for use with differing artillery organizations to those of the French Army. ATILA II incorporates lessons learned from the initial deployment of the ATILA I system and employs CABA II and CABA 21 processors at battery and command posts, but retains the same basic capabilities.

The Royal Thai Marine Corps ordered the ATILA fire-control system in 1983 to control its Noricum GHN-45 howitzers. The control system was delivered in 1985 and used in combat during 1986 and 1987. During that time, the ATILA/GHN-45 combination established an enviable reputation for counter-battery fire, suppressing Vietnamese 130-millimeter batteries with great efficiency. The Thai Marine Corps subsequently ordered additional GHN-45 guns from a revived production line but no additional orders for ATILA units have been placed.

Between 1984 and 1987, Iraq used the ATILA system extensively in its war with Iran. Some of the ATILA systems used were delivered directly from France, while others are reported to have been loaned by Saudi Arabia and Jordan.

In 1989 the Dutch Ministry of Defense terminated the development program for a new artillery computing and fire support information system. The system was being developed by Hollandse Signaalapparaten under the title VERDAC/VUIST. Over US$8 million had already been expended on this project. Four contending teams competed to replace this program, these being Telefunken (offering the German Army Adler), Delft (offering the Elbit Combat equipment), Radio Holland (offering Tadiran's Bombard), and Signaal (offering ATILA-3).

By January 1992 a shortlist comprising the ATILA-3 and Combat (now offered by Alcatel following a trade embargo placed on Delft) had been established. Finally Alcatel was awarded a contract for a single VUIST system

in September 1992 with a production order to follow in 1995. At time of writing, this order has not been placed.

CIMSA SINTRA division of Thomson-CSF has been appointed prime contractor for all transmission systems in the ATLAS version intended for use with MLRS. These systems are based on the Stratagems range of modular processors and displays developed by Thomson-CSF for use in the Samantha battlefield air defense system. Further modifications will be required for systems intended to equip 155 mm batteries. The three MLRS battalions are in process of receiving ATLAS, the first being equipped in 1992 with the process completed in 1995.

The organization was changed during this process to a single rocket artillery battalion within a corps-level artillery brigade. This battalion has 40 MLRS launchers in four batteries. This change in organization will have required modifications to the associated fire control systems.

French defense expenditure restrictions dating from 1994 strongly suggested that this program would be scaled back and/or delayed. The major financial setback however, struck in early and mid-1996. A French defense budget crisis forced a wide-ranging program of cut-backs, delays and program cancellations. Accurately described as a financial blizzard, this review forced major economies in front-line programs previously considered sacrosanct. No complete list of the cut-backs and delays is available, but it is likely that the procurement of ATLAS will be affected. It will probably take a low priority in comparison with high-visibility programs.

Funding

The ATILA/ATIBA system was developed and produced using French government funding. The ATLAS development of the ATILA system is estimated to cost US$1 billion.

Recent Contracts

No contractual information has been made publicly available.

Timetable

1972	ATILA design studies started
1978	Prototypes delivered for evaluation
1980	Deliveries of ATILA 1 to the French Army began
1982	First studies of ATLAS replacement for ATILA
1983	CIMSA revealed upgraded ATILA II
1985	ATILA delivered to Royal Thai Marine Corps
1986	ATILA delivered to Venezuela
1986	Final deliveries to French Army

1988	Experimental ATLAS system delivered
1992	ATLAS deliveries to French Army MLRS started
1995	ATLAS deliveries to French Army MLRS completed

Worldwide Distribution

France (72 ATILA/ATIBA)

Iraq (72 ATILA/ATIBA and Palmier)

Jordan (36 ATILA/ATIBA)

Saudi Arabia (30 Palmier)

Thailand (5 ATILA/ATIBA)

UAE (4 Palmier)

Venezuela (9 ATILA/ATIBA)

Forecast Rationale

In its original form, ATILA has probably reached the end of its market life. As the earliest system of its type, it has benefited least from the recent advances in electronic technology and is now dated in its communications capabilities and structure. ATILA was effectively employed by Iraq during the Iran-Iraq war, during which ATILA-controlled artillery fire decimated Iranian infantry attacks. ATILA-equipped artillery units were among the first into Kuwait following the Iraqi invasion of that country.

The ATLAS system, the follow-on to ATILA, is directly competitive with the British BATES, which is entering service within the same time frame. The successful combat service of ATILA will greatly aid ATLAS in this competition, while the well-publicized development problems inflicting BATES will damage that system's chances accordingly. ATLAS can be expected to gain a few sales as an upgrade to the systems acquired by existing ATILA operators, or as a replacement for those systems. However, restrictions on defense expenditure suggest that French production will be delayed, negatively impacting the system's availability for export.

With the loss of the Netherlands contract to Alcatel, there are no obvious export candidates for the French system. Many of France's earlier customers have become increasingly committed to US systems (Saudi Arabia and the UAE) or have ceased to be accessible (Iraq). Additional customers for ATLAS may emerge, but these are unlikely to be on the scale once envisaged.

Ten-Year Outlook

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December 1997