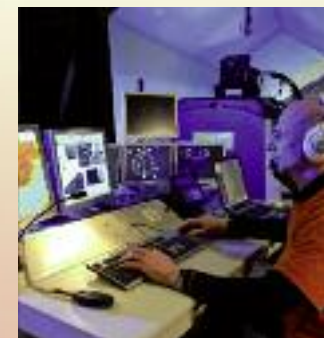
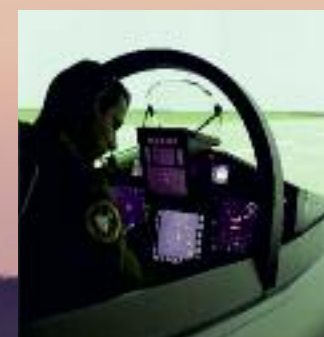


ASTA – The Winning Solution



Mission Readiness Training

- Proficiency Training
- Tactical training
- Mission rehearsal
- Covering the most demanding scenarios



Cost-effective Training

- Substituting live flying training
- More than 50% of training in ASTA
- Repetition stabilises skills on a high level
- Training availability 24/7

Realistic Training

- Precise aircraft performance
- Realistic cockpit
- Up to 360° Field of View
- High Performance Synthetic Environment



Customer oriented Training

- Effective customer oriented training
- Proven in Libya operations
- Trusted Air Policing (London Olympics, World Economic Forum)
- Effective preparation of several international exercises



Air Forces save millions of Euro every year by using ASTA for Eurofighter Typhoon training.

22 ASTA devices are in use in 5 Eurofighter Typhoon user nations.

A large customer base for joint operation, tactical training and shared experience.

TRAIN AS YOU FIGHT

The ASTA Map



Eurofighter

Eurofighter Jagdflugzeug GmbH
Am Söldnermoos 17
85399 Hallbergmoos
Germany
Telephone +49 811 80 0
Fax +49 811 80 1557
E-mail info@eurofighter.com

www.eurofighter.com



Eurofighter Typhoon

The world's most advanced new generation multirole/swing-role combat aircraft comes with the unrivalled training capability of the ASTA (Aircrew Synthetic Training Aids) system. This high-quality, high-fidelity training system for pilots is an integral part of the Eurofighter Typhoon system. ASTA has been designed for Eurofighter Typhoon pilots to

support mission readiness training and cater efficiently and cost-effectively for the most demanding training needs. The ASTA suite comprises a full range of training devices, from basic to high-end, and can be specifically tailored to the needs of the Customer. ASTA is providing a fully

immersive cockpit and synthetic training environment allowing full mission training. It has been designed from the outset to cover all envisaged roles for the Eurofighter Typhoon while on deployment or on active service.

Mission-ready: Anytime – Anywhere

Effective Proven Trusted

Col. Andreas Pfeiffer
Former Wing Commander FW 74,
Neuburg/Germany:
"The preparation in ASTA for the Alaska Red Flag exercise was so real, that pilots came back and reported a "déjà vu" already after the first mission. ASTA is best preparation training possible, as close to reality as it can be."

Daniel Kraus
Head of Training and Simulation Centre,
Zeltweg/Austria:
"Due to the operational experiences accumulated so far, it can clearly be stated that without ASTA, a safe introduction as well as the ongoing operation of such a complex weapon system would not be achievable. With the extraordinary volume of functionalities which ASTA provides, Air Forces of the operator nations have an efficient and indispensable tool for the education and training of their pilots. Without ASTA, this could only be partially realized through substantial additional costs."

Anthony Gregory
RAF Wing Commander, MOD UK:
"The exceptionally high quality of training available from Eurofighter Typhoon ASTA simulators contributed greatly to the ability of the RAF to prepare pilots for full multi-role operations in support of the recent Libyan crisis. It is testament to the ASTA, as part of an integrated training solution, that pilots could be trained to the exacting standards required for combat operations and be ready for deployment within one week."



ASTA – Modular Design

The modular design of the ASTA system allows several options depending on Customer requirements.

The Customer can select his preferred cockpit solution. A mix of the cockpit options is possible.

- Helmet mounted visual system solutions
- Faceted display up to 360°
- Dome display up to 360°

Visual System Options

COMMON DEVICE KERNEL A common element for every device

- Original aircraft software
- High Performance Synthetic Environment
- Full network capability

Cockpit Options

- Full replica cockpit
- Original aircraft equipment
- Virtual cockpit

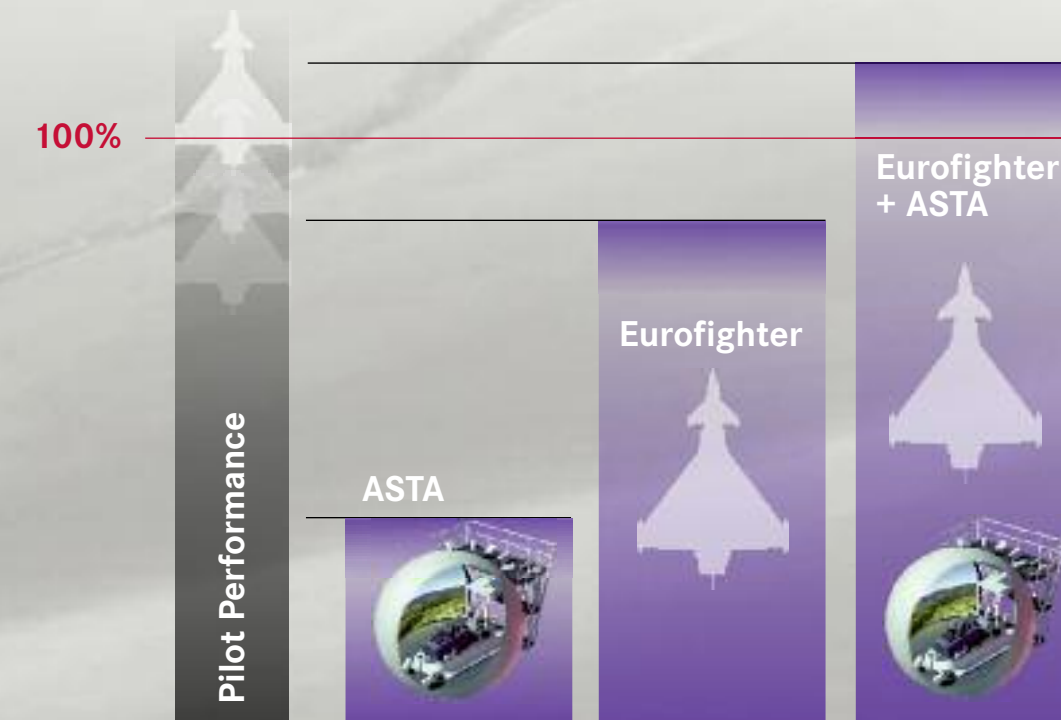
ASTA's suite of training aids which accompanies the continuous upgrade of Eurofighter Typhoon capabilities, comprises the following training devices:

- FMS – Full Mission Simulator
- CT – Cockpit Trainer
- DCT – Deployable Cockpit Trainer
- BTD – Basic Training Device

ASTA – Pilot Performance

A combination of training with ASTA and the real aircraft exceeds the Air Forces' 100% Training Requirement to achieve Combat Ready status.

Only training with the high-fidelity ASTA system allows training of Crew Resource Management (CRM) safety and Mission Readiness Training (MRT) issues.



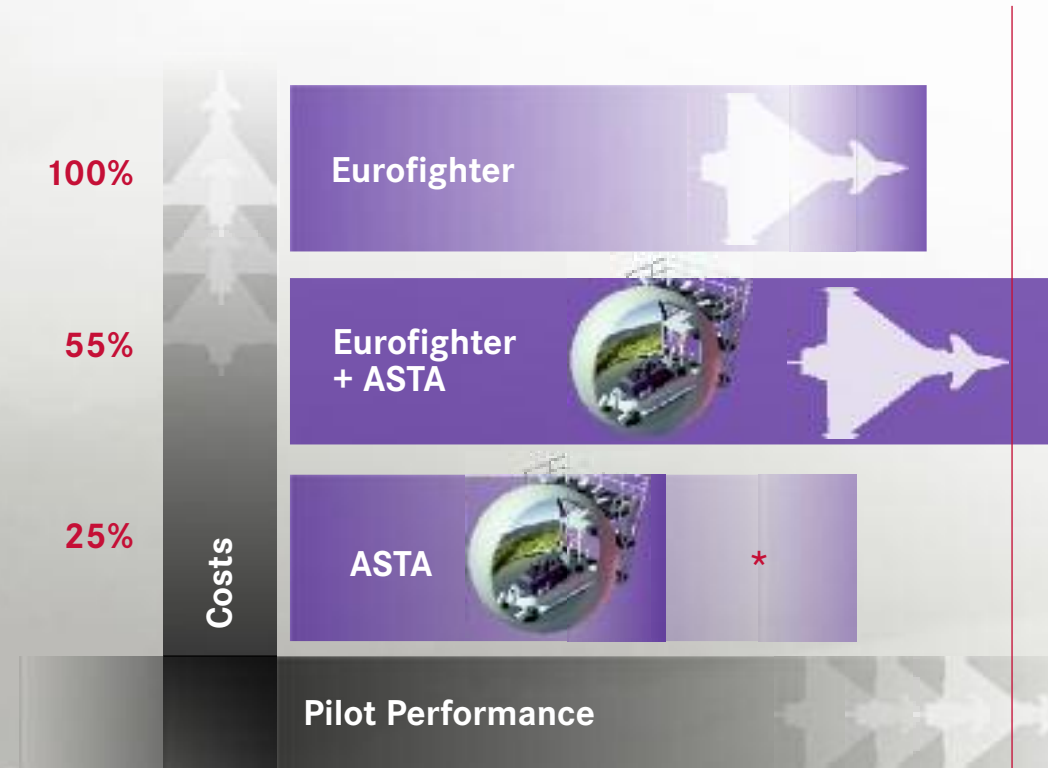
Training concepts

Pilot Performance in varying training concepts
(Assumption: 50% Simulator Training and 50% Flying Training)

ASTA – Training Costs Reduction

Only a combination of ASTA and aircraft flying training ensures combat ready status in an efficient and cost-effective way.

Training of the complete spectrum of tasks up to Flag Exercises in the simulator reduces the need and costs for live exercises.



Training costs of different training concepts

(Assumption: 50% Simulator Training and 50% Flying Training)
(* reach 80% capability in the ASTA only for a given time)

ASTA – Benefits for Customers



Features	Benefits
Original aircraft software	<ul style="list-style-type: none"> ■ "Train as you fight" - no surprises in the aircraft for the pilot, the simulator has the same behaviour as the aircraft! ■ Immediate transfer of acquired skills from the simulator to the aircraft -> pilot immediately capable
High fidelity / high performance synthetic environment	<ul style="list-style-type: none"> ■ The pilot experiences the environmental effects, like weapon firing and impact, or Electronic Warfare like in the real world. ■ Computer Generated Forces (Virtual Players) behave like manned players.
Combination of original aircraft software and high fidelity / high performance synthetic environment	<ul style="list-style-type: none"> ■ Pilot is mission ready from day one ■ Cost reduction through transfer of flight hours to simulator (extending airframe life and operational availability) ■ Situational awareness is drastically improved by repetition of non-obvious critical situations ■ Mission rehearsal and practise of war time missions which cannot be flown due to safety and/or peacetime regulations, missing assets or ranges.
Use of mission data as in the aircraft	<ul style="list-style-type: none"> ■ Preparation of the mission is identical for the simulator and the aircraft. No difference for the pilot until step time.
360° horizontal Field of View (HFoV)	<ul style="list-style-type: none"> ■ Supports the full range of training tasks from familiarisation training up to combat-ready training
Over 500 malfunctions implemented, selectable in every possible combination	<ul style="list-style-type: none"> ■ Intensive, best possible malfunction training for the pilots
Networking capability and integration of virtual players	<ul style="list-style-type: none"> ■ Maximised training realism and flexibility
Extensive use of COTS hardware	<ul style="list-style-type: none"> ■ Reduced in-service costs



Helmut Blaschke
Former German Air Force Weapon Instructor, holding over 3,000 hours on fast jets as a weapons instructor and instructor pilot, and giving training to the Eurofighter pilots in ASTA for 6 years:
„Due to the customer confirmed 'high degree of expertise transfer' from ASTA to the real world flying, we implemented a research based 'Mission Readiness Training' (MRT) into daily ASTA-Training. Mission Readiness Training includes 'Combat Resource Management 2.0' (CRM2.OTM) as well as 'Threat and Error Management 2.0' (TEM2.OTM). Therefore MRT allows us not only to prepare pilots for the upcoming mission with a high degree of fidelity, but also to identify threats for errors of the aircrew in all regards of the combat flying envelope and the mission to come. The feedback of the pilots so far is tremendous, because ASTA-MRT not only makes operation safer, but also more efficient."

Col. Bernhard Teicke
Wing Commander FW 73 „Steinhoff“, Germany
"The ASTA MOB at JG 73 "S" in Rostock-Laage, prepares all German Fighter Pilots for their future Eurofighter activities. The ASTA represents a key growth of simulation supported training for the German Air Force. Any mission profile of the current syllabus can be trained in the ASTA in advance of the real flying mission. This significantly increases training efficiency. The result is a comprehensive aeronautical training using modern networked simulators and a unique computer based training facility. Despite the high demand for and high number of daily training missions, ASTA has proven to be very reliable and has become the backbone of German Eurofighter training."

