

Fuzing for UK Precision Guided Bomb UK PGB – ASR 1248



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Dave Pengilley, Business Development Executive

Thales Missile Electronics Ltd

+44 (0) 1256 387 419

+44 (0) 7740 634 494

david.pengilley@uk.thalesgroup.com

UK PGB program still in competition

Down selection process has resulted in 2 final competitors

- MBDA/Boeing bidding with UK-JDAM variant
- Raytheon Systems UK bidding with Paveway IV

Both Primes have selected MEHTF as the fuze for their proposals

Award announcement anticipated in May 03, contract 3Q03



- Program Background -
- UK Fuzing Philosophy -
- UK Fuzing Options -
- Technical and Development Status -



Jointly prepared presentation by ATK and TME

The RAF Staff Target (ST(A) 1248) was initiated in the early 90s

- **The program is now known as UK Precision Guided Bomb**
 - **UK PGB**

The program was initially conceived as a tail modification kit for the UK in-service, 2” pocket, bomb stock

- **In parallel, UK MoD sponsored UK-US PSFT program giving support to MEHTF**
- **MEHTF is being developed for AFRL by ATK with TME support**

In 2000 UK MoD/Dstl studies established that the US Mk82 was better suited to UK requirements than the UK 540lb warhead

- **Dstl undertook a fuze study that concluded that MEHTF was the best solution but that JPF was an acceptable alternative**

Up to the mid-80s the UK fuzing stock consisted of a large variety of release mode specific fuzes and pistols

The Falklands War highlighted some performance problems and the logistic burden associated with this variety of fuzes

As a result, the UK established a requirement for a single fuze capable of fuzing all UK freefall and LGB weapons in all release modes

TME won the subsequent competition with MFBF

- **This fuze has been used very successfully by the UK since the early 90s (Desert Storm, Kosovo, ...)**

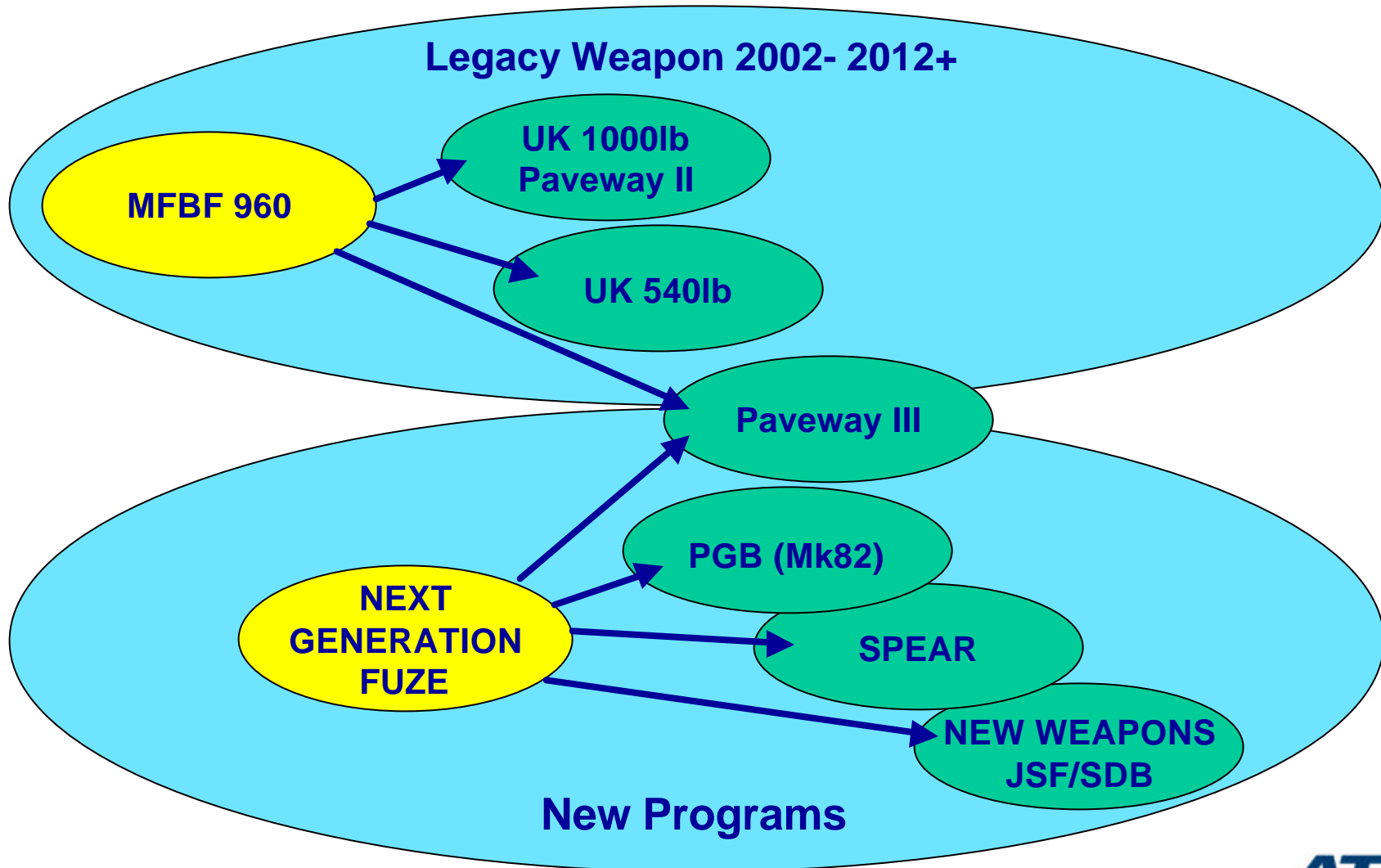
UK policy is to have a variety of weapons for all war scenarios/ targets

- **But number of individual weapons is small**
- **To avoid a logistic burden and achieve economies of scale, a single all-purpose fuze solution is preferred**
 - **Approach proved successful with MFBF**
 - **MoD accepts that this may result in a fuze overmatched to some requirements, including PGB**

MoD has invested in advanced/intelligent bomb fuzing research in conjunction with TME for over 10 years

Recently, MoD fuze investment has been channelled into MEHTF through PSFT plus some other technology risk reduction exercises

UK MoD Warhead and Fuzing Options



By 2001 the UK fuzing philosophy resulted in 3 basic options:

- **MFBF adaptation**
- **JPF (FMU-152)**
- **MEHTF (2” fuze in 3” ‘can’)**

However, UK procurement policy remains to procure Systems and not components

- **Thus fuze selection has been left to the Primes**

Both MBDA and Raytheon have selected MEHTF for their PGB proposals

Prior to MEHTF and PSFT, both ATK and TME funded hard target research work

TME & ATK have successfully worked on MEHTF and PSFT for the last five years

TME will be Prime for UK PGB with ATK as major sub-contractor

- **These roles will reverse for a US program**

PGB will fund the final development and qualification of the MEHTF/PSFT fuze

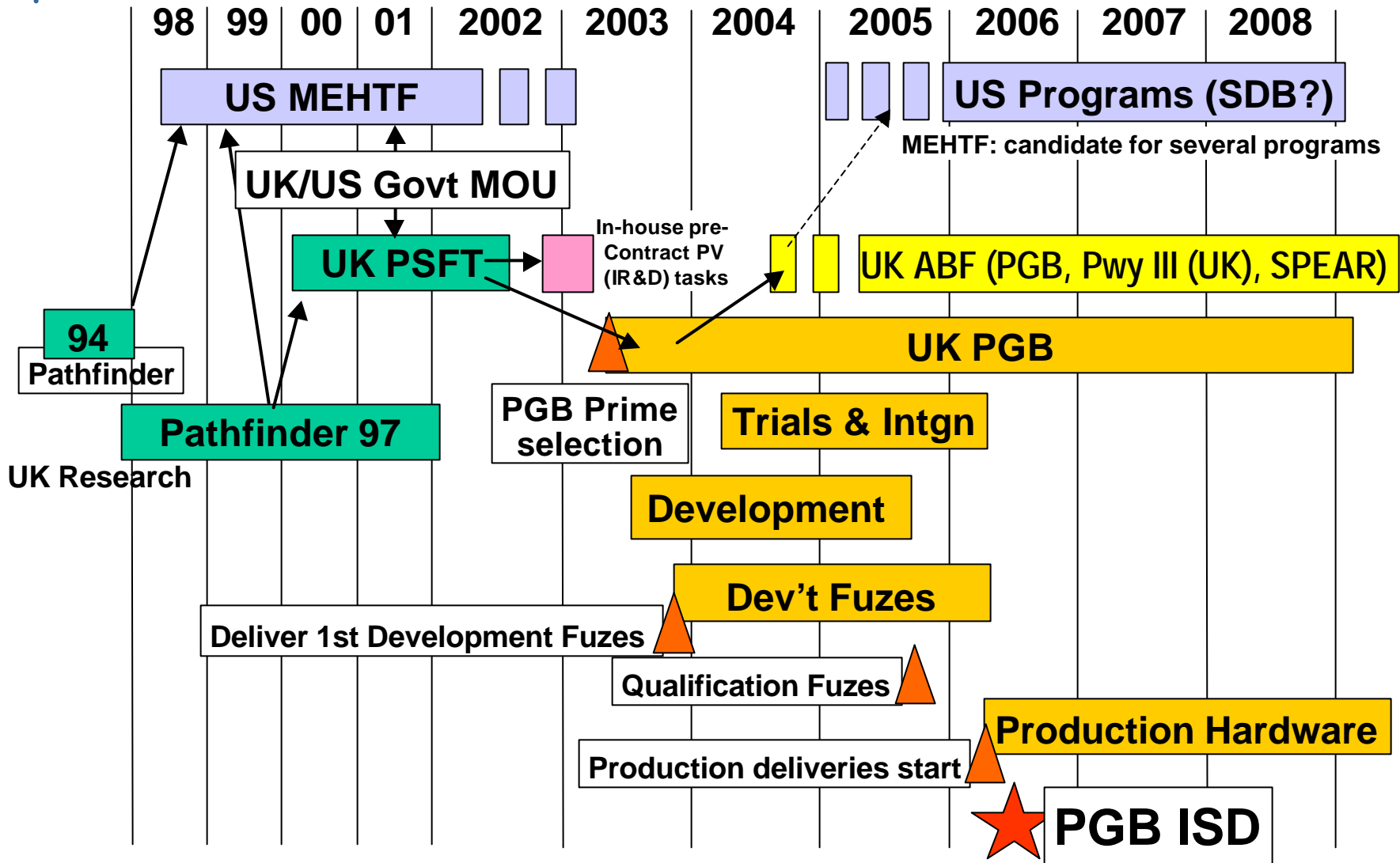
UK development investment in MEHTF has been circa \$20M

- **PSFT and PGB**

Production:

- **Initially approximately 2,000 weapons**

MEHTF – UK PGB Timelines

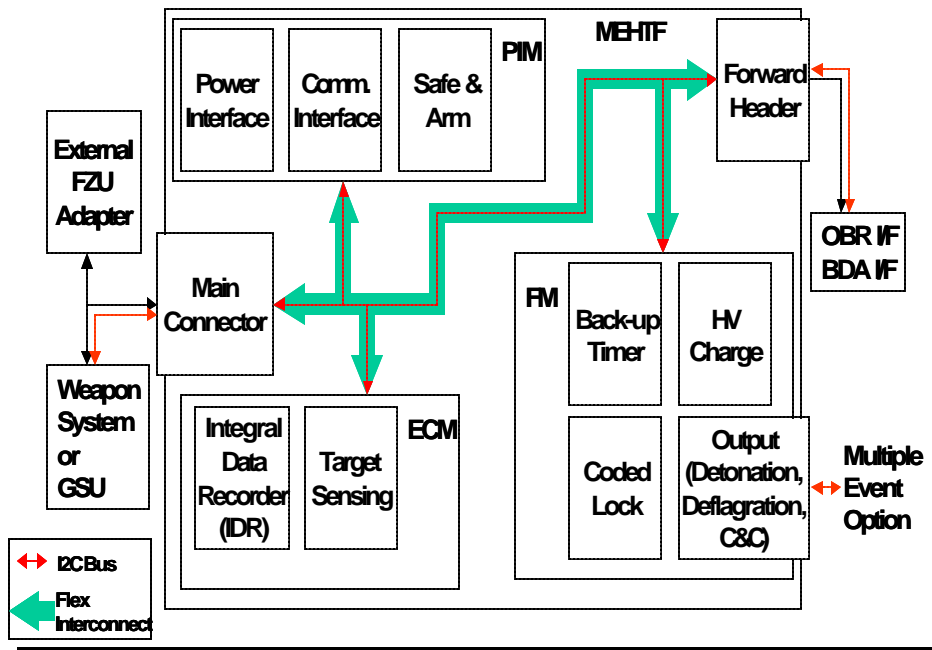
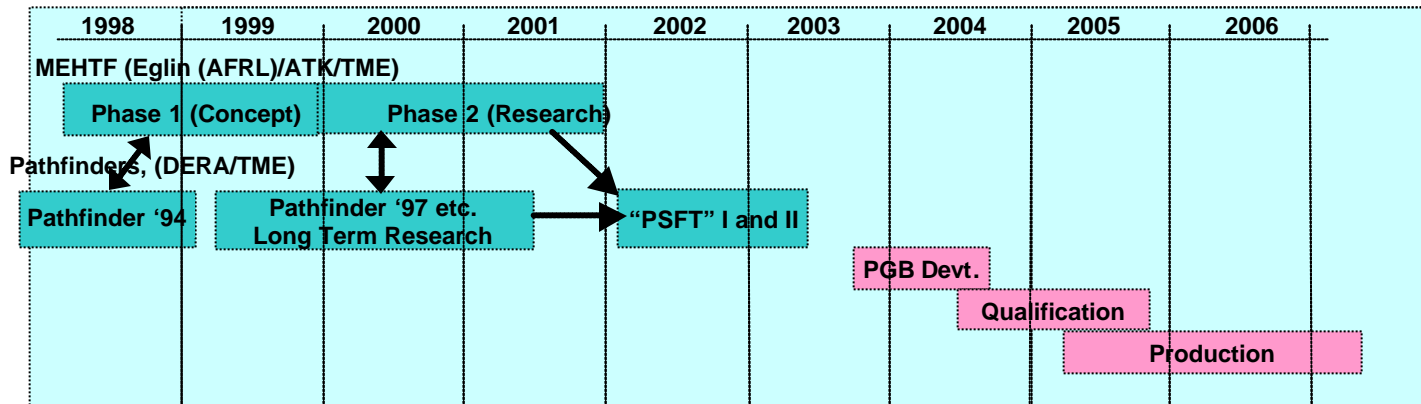


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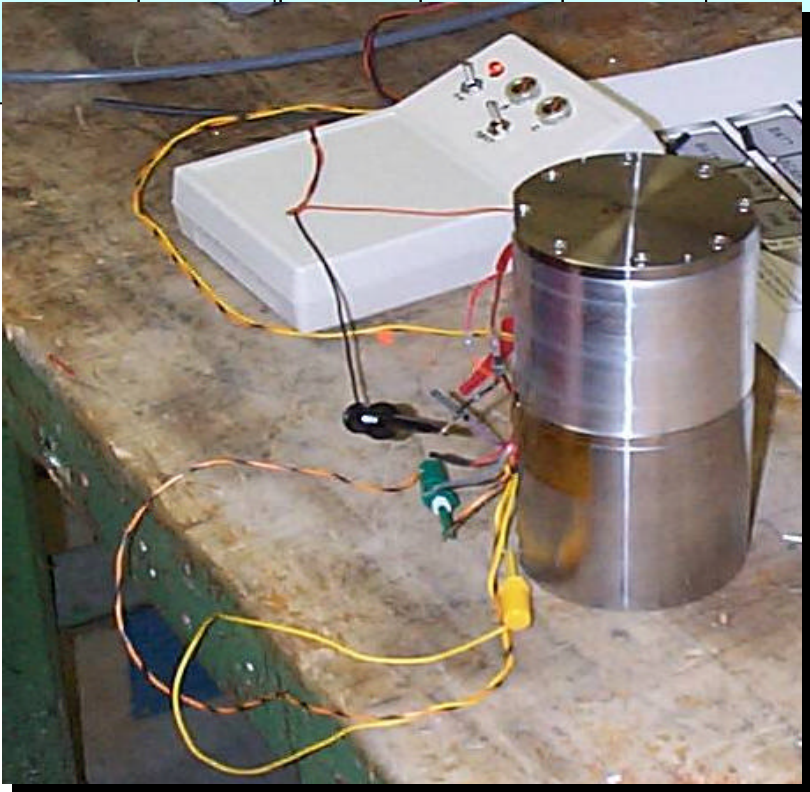
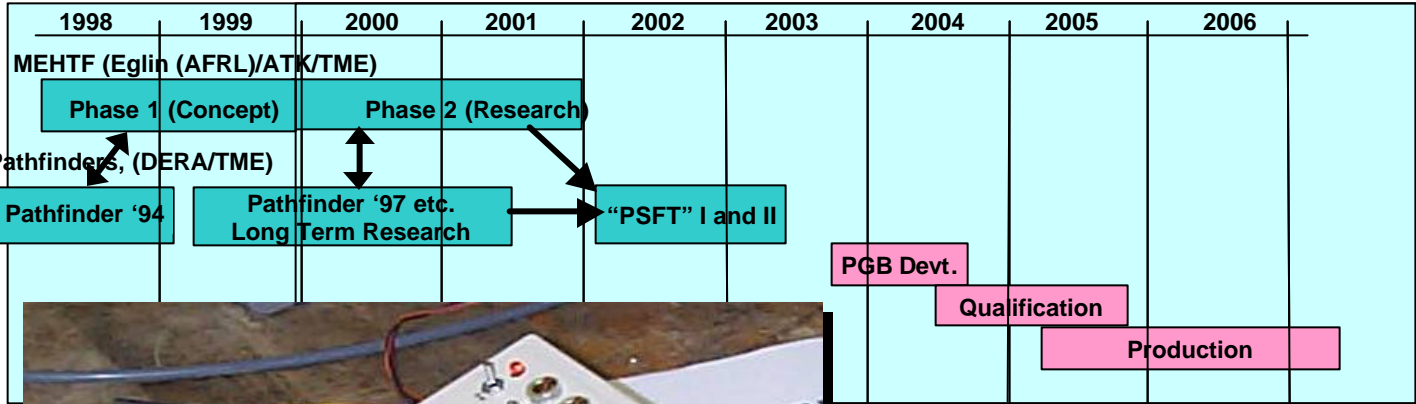
MEHTF Technical and Development Status

MEHTF Development Status



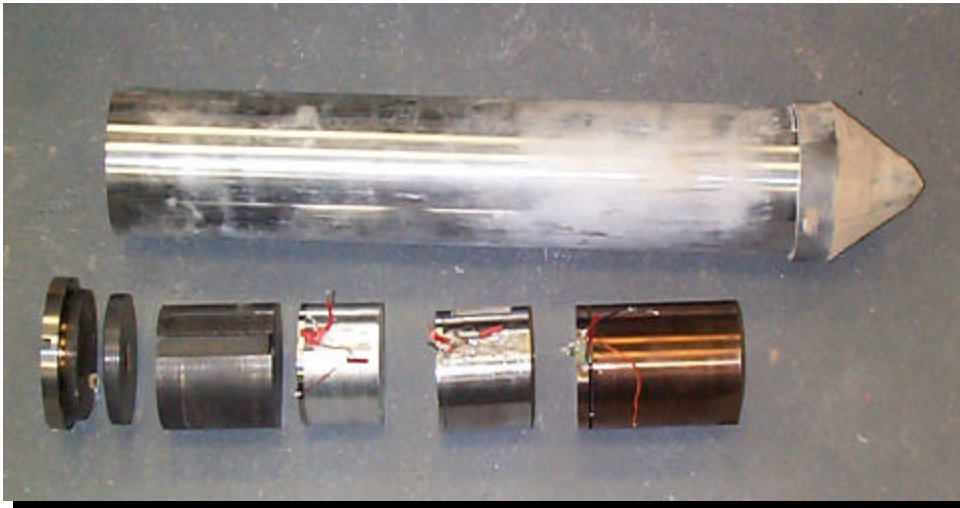
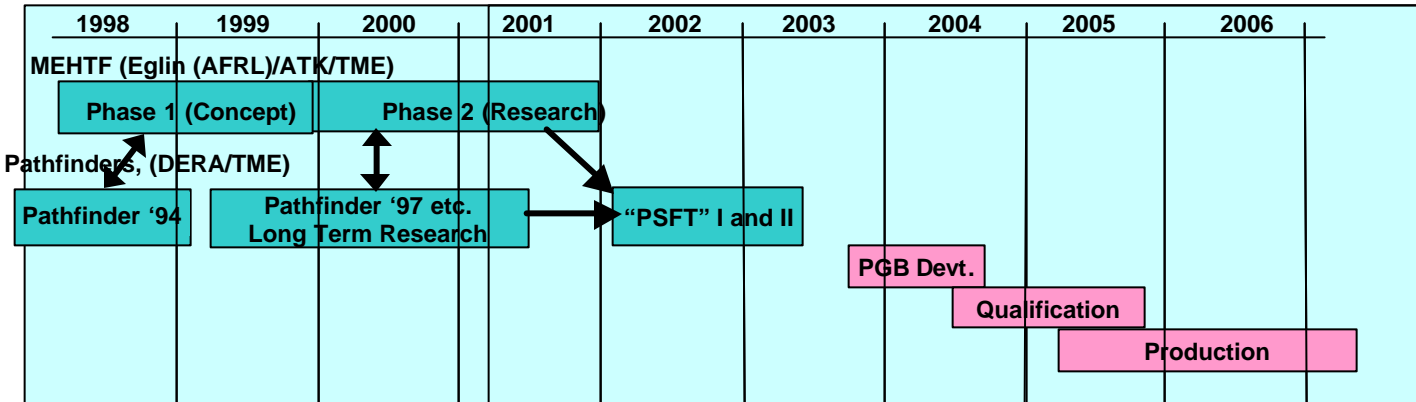
From Paper Concepts

MEHTF Development Status



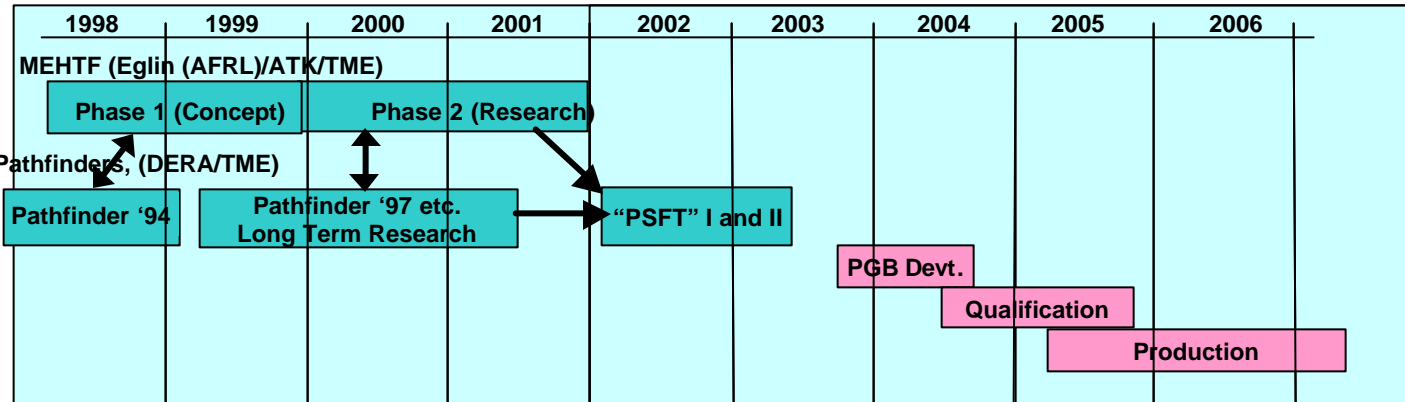
From Paper Concepts
To Test hardware

MEHTF Development Status



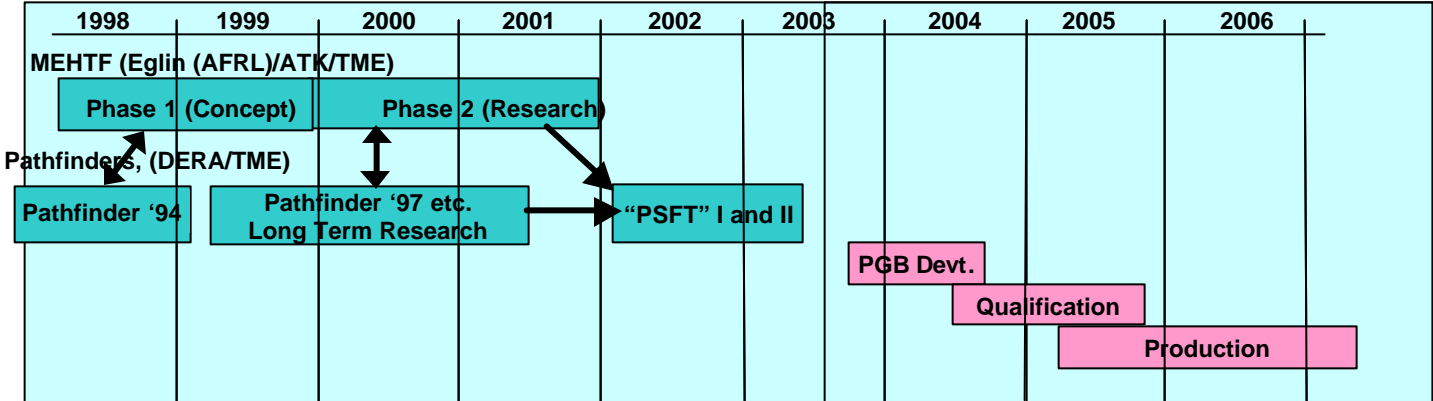
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MEHTF Development Status



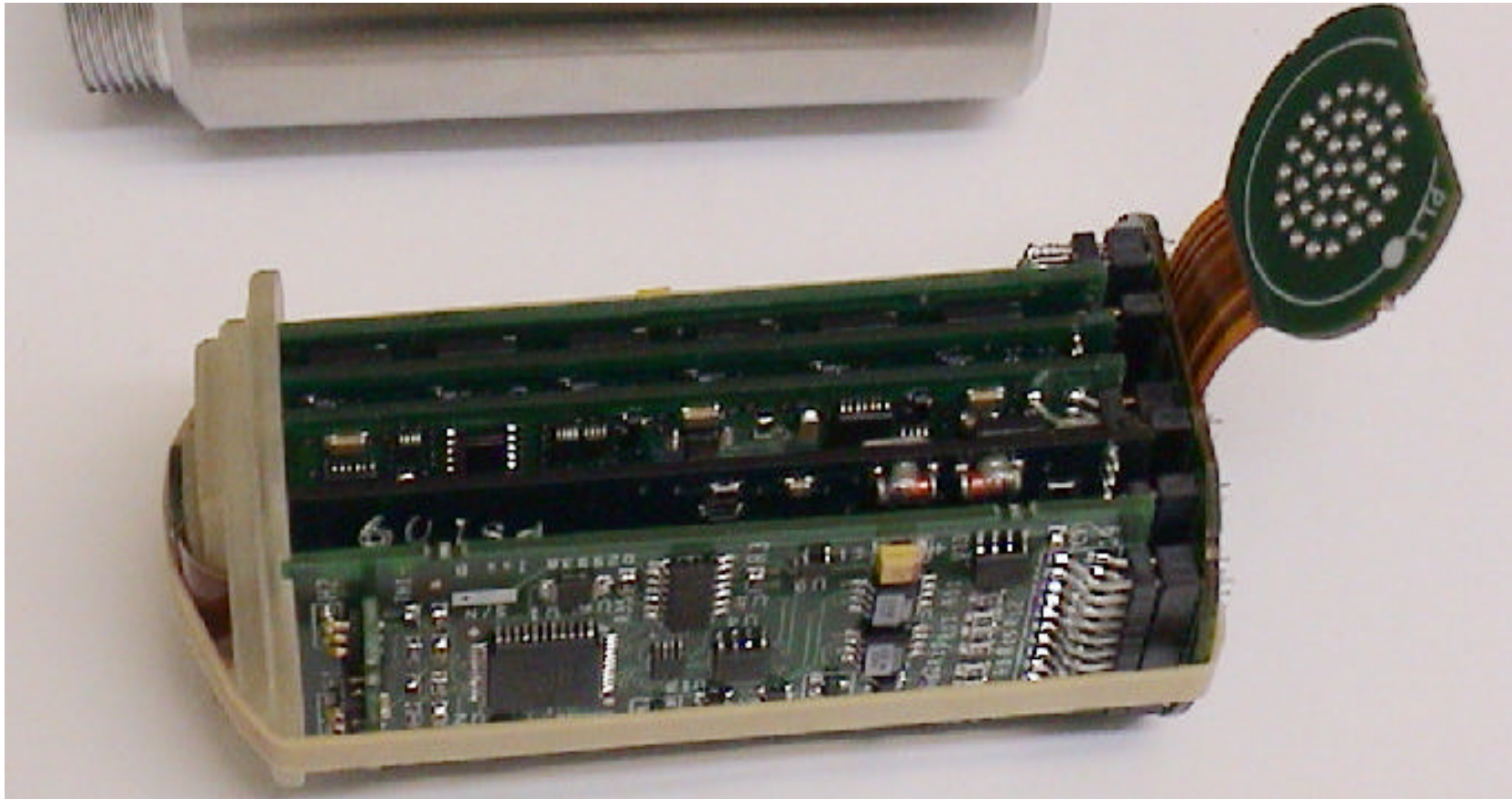
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 To Functional Prototypes
 To Development Hardware

MEHTF Development Status



From Paper Concepts
 To Test hardware
 To Functional Prototypes
 To Development Hardware
To PSFT Development Hardware

Assembled Fuze Boards



- Under both US and UK government funding, and with our own IRAD and PV support, ATK and TME have brought the MEHTF fuze to a level of maturity suitable for selection in a major UK weapon procurement program
- MEHTF fits with the UK philosophy of utilising a single fuze with the capability and the growth potential to support many future weapons
- MEHTF will be the UK's next generation fuze and has strong potential to spiral back into the US



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