

FAQs

A Beginner's Guide to UTMC



1 What is UTMC?

UTMC is a UK-based initiative which has developed an **open technical framework** for traffic and transport management systems.

It is overseen by a community group (the "UTMC Development group", UDG) which represents local and national highways authorities, systems suppliers, and central Government. It benefits from links into international activities and standards organisations, and focuses on achieving practical solutions for today's projects and tomorrow's anticipated problems.

2 What does UTMC cover?

Functions covered by UTMC include those provided by UTC, VMS, CCTV, car park guidance, ANPR, air quality sensors, and many others. The range of information that traffic managers can make use of is growing continually, and the functional scope of UTMC is expanding along with the marketplace.

UTMC concentrates on **standards and protocols for interfaces** between roadside units and the control centre, applications within the control centre, between control centres, and (in the future) between roadside units and vehicles.

UTMC does not specify the functionality of devices or systems: we believe that these are, on the whole, best left to the innovation of the supplier community.

3 What does UTMC stand for?

At the outset in the early 1990s, UTMC stood for "Urban Traffic Management and Control", as this was the initial target context. It was very quickly realised that the same challenges and solutions apply to suburban and rural local roads. More recently, the same approach has been extended to the inter-urban

and strategic context, and the Highways Agency has now adopted UTMC within its technology strategy.

In reality, UTMC is a simple brand, a set of four letters that refers to the national Technical Specification and associated guidance. Insofar as it stands for anything, "**Universal Traffic Management and Control**" is gaining ground in popular usage.

4 Why use UTMC?

In the UK, prior to UTMC, ITS systems were bespoke: designed and manufactured using proprietary specifications owned and favoured by particular suppliers. The result was a fragmented market in which it was difficult and expensive to get different suppliers' systems to work together. Implementers were locked in to their particular suppliers for the life of their systems, and often for upgrades and replacements. This made it hard to meet the more demanding and cross-cutting transport policy objectives.

Open standards, such as those promulgated by UTMC, are non-proprietary and published for anyone to use. UTMC standards therefore:

- Allow different traffic management and control tools and data sources to exchange information using a commonly understood language. This facility makes UTMC-compliant systems **interoperable** with minimal effort.
- Allow the information from different traffic management tools to be brought together (typically in a "common database"), enabling the whole system to give **greater value** than the sum of the individual parts.
- Creates a more **open and competitive** market for implementers with wider choice of systems and suppliers.

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- Facilitates phased implementation of systems by reducing the risk of systems being outdated, providing **future proofing** for expansion and upgrades.
- Allows any mix of communications technologies and networks to be used, including sharing with, for instance, the local Metropolitan Area Network or cable TV networks, thus **optimising cost and performance**.

5 What is the UTMC Technical Specification?

The UTMC Technical Specification consists of two principal documents:

- **The Framework Specification, TS003**
- **The Objects Registry, TS004**

The Specifications and Standards Group (S&SG) of the UTMC Development Group (UDG) is responsible for the management and maintenance of the UTMC Technical Specifications.

The Technical Specification is updated, normally annually, through a documented consultation and approval process. Changes may be submitted by anyone, but most arise as a result of specific working group activities set up within UTMC.

6 What does the UTMC Technical Specification say?

The UTMC Technical Specification embodies an evolving set of protocols. The current version can be summarised as follows:

- Any communications networks (wired and wireless) that provide the necessary bandwidth, security etc.

- Networking based on Internet Protocol (**IP**), and IP services such as HyperText Transfer Protocol (**HTTP**), and Simple Network Management Protocol (**SNMP**), in line with the mainstream IT industry.
- Adopts widespread technology frameworks for the support and integration of software, including Structured Query Language (**SQL**), Common Object Request Broker Architecture (**CORBA**) and the eXtensible Markup Language (**XML**).
- A large and expanding set of **Data Objects**, presented in a format suitable for each of the various exchange and storage frameworks.

7 What is likely to happen to UTMC in future?

UTMC will continue to respond to market demands, and maintains close links with most of the UK's leading users and providers of traffic systems to ensure that it is well positioned to do this.

Over the next 5 years or so (that is, 2010 – 2015), it is anticipated that the main issues that will impact on UTMC will be:

- The current economic climate and the need for implementers to get their UTMC systems to deliver "more from less".
- The adoption of UTMC by the Highways Agency, which will require UTMC to evolve further to meet specific requirements of the Agency.
- The EU ITS Action Plan and Directive which aims to develop Europe-wide specifications for ITS, requiring UTMC to align with European initiatives such as DATEX II.