



Someone to watch over me

UK residents are among the world's most watched, according to various CCTV statistics. But what about our vehicles? Automatic Number Plate Recognition has infiltrated many areas of our motoring. **Neil Barrett** has been casting an eye over the high-tech watchers

the first arrest credited to ANPR had been made, with the system tracking a stolen car.

Further developments followed, until in 1993 it became a crucial part of the “Ring of Steel” security measures around the City of London, introduced following terrorist incidents in the capital’s financial district. A big coming-of-age moment was in 1997 when police ANPR data became centralised, rather than held only at local force level.

So we have firmly established that ANPR’s roots – and the majority of its use in the 20th century – are in law enforcement. The 21st century, however, has shaken off that exclusivity of catching the bad guys. Nowadays there are many ways in which ANPR is involved in watching our vehicles.

TRAFFIC MEASUREMENT

Sometime around the year 1999 I had a little box in my car which had four or five lights on it. This box knew where the traffic jams were and could tell me such news in a fairly ambiguous way that I never really understood. What I did get was that the technology behind it was revolutionary. Trafficmaster had installed cameras on various roads and by checking the time taken for vehicles to travel from A to B, their system could work out what speeds were being achieved and how congested the roads were. This technology now provides traffic information for highways agencies, radio stations, satnavs and more.

PARKING

Ticketless parking is here to stay. One way this is being delivered is through ANPR. Many car parks now take a snapshot of your number plate on the way in, allowing you to enter that number on a terminal, then pay and go. ANPR also makes pre-paid parking simple, at airports for example. Convenience for drivers is one side of the coin. It’s also easier and cheaper for the car park owner to enforce the rules.

ACCESS CONTROL

Used in industrial estates, company HQs, gated communities and many other places with barriers, ANPR is great for simplifying the process of getting in and out. Pre-authorised vehicles just drive up to the barrier and are welcomed automatically.

UNINSURED VEHICLES

These are often untaxed, unroadworthy or both. They also push up premiums for the rest of us by an average of £33. Thanks to ANPR, as well as the portability of the camera and back-office technology, a self-contained detection system can be placed in a small vehicle to help find these vehicles in use. All that’s needed is a camera >>



The Automatic Number Plate Recognition (ANPR) process basically goes like this: an image is taken from a high-resolution camera. The technology behind the scenes finds a vehicle’s number plate in the image, splits the plate up into individual elements, recognises each one as the correct letter or number and combines them all into the full registration in digital form, to be matched against a database. It’s clever stuff – more so when you think about how many different fonts and styles from other countries’ plates modern systems they need to deal with.

There are a fair few privacy concerns – it’s very “Big Brother”. But to go back to ANPR’s beginnings, forget 1984. 1976 is the year to focus on here. It’s true. ANPR was born almost four and a half decades ago. A launchpad for law enforcement technology called the Police Scientific Development Branch invented the system and was able to get it into at least two locations (including the Dartford Tunnel between Essex and Kent) by the end of the 1970s. By 1981,

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TECHNOLOGY UPDATE

>> and an appropriate database. But before we line up to cheer as the uninsured are identified, brought in and dealt with, it appears that far too many are avoiding any consequences. Figures from the Environmental Transport Association published at the beginning of January show that in spite of cameras in some police force areas identifying more than 4,000 uninsured vehicles every day, very few drivers receive a penalty or are sent for prosecution. In 2018, only 79,713 drivers received penalty points for having no insurance – a drop of one third on the previous year. This is in spite of police figures showing that uninsured drivers are six to seven times more likely to be involved in a fatal collision - and 65 per cent of uninsured drivers have been criminally active in the previous two years (not just committing traffic offences).

PLANNING NEW INFRASTRUCTURE

There was a time when you could know that there might be some road improvements coming because a couple of people with clipboards were braving the elements to tally up the traffic. The job of getting reliable traffic movement statistics is now achievable with a few mouse clicks. Instead of just a few hours' or days' information being available, planners have access to big data over a much wider geographic area and time period. Years of flow data, powered by ANPR, can help influence which roads to build next.

SPEED ENFORCEMENT

An output of ANPR that more and more motorists are familiar with is the Notice of Intended Prosecution. More than two million speeding tickets were issued by UK police in 2019, so it's a huge part of the picture. That said, the early years of electronic speed enforcement always had a human being involved, so we can only credit ANPR with making the process more efficient.

CATCHING THE CRIMINALS

On the subject of law enforcement, whilst there is a valid debate on privacy and civil liberties, it's clear from a technological perspective that ANPR has been vital in

stopping some serious crimes in their tracks and bringing perpetrators to justice.

CONGESTION CHARGING

Low emission and congestion zones have opened up across the world, not least in London where there is a congestion charge zone, a low emission zone and an ultra low emission zone – albeit with the first and last of those being the same zone at the moment but with different rules.

With the sheer volume of traffic in the capital, ANPR is the engine behind working out who's driven when and where inside the various zones.

Pic: David Hawgood



TOLLS

This brings us nicely full-circle with the story of ANPR. One of the recent beneficiaries of the congestion-busting benefits of ANPR has been motorists using the Dartford Crossing, where those early trials began in the 1970s. Since the toll booths have been removed, this critical piece of the UK road network has become "free flowing" (more so over the north-to-south bridge than in the tunnelled direction, from my experience).

Sadly for the pocket of many a motorist, the need to pay wasn't removed alongside the physical infrastructure. Some things never change, though nowadays it's relatively new ANPR rather than good old humans totting up the bill. ■

Pic: John Bradley

