

Even 'video-resistant' vandals are brought to justice

Experience with CCTV in the public transport sector: in Berlin more than 100 experts discuss security.



Attacks on passengers, drivers and ticket collectors in BVG bus, trains and trams are becoming increasingly brutal. On a Berlin number M29 bus in early March 2008 there was a near fatal knife attack on a courageous Turkish bus driver who had rushed to the assistance of two passengers.

All the talk is of CCTV, not least because of the sensational incidents of violence in the public transport systems and the ongoing security debate. At the same time more and more German buses and trains are operating with cameras in them - and no longer just in the conurbations and big cities. What are the experiences of transport providers who use mobile monitoring? How do their passengers and their on-board staff react? What support is provided by the trade associations and political policies.





Even in rural areas vandalism is increasing, especially on school services. After a model project and well-meaning appeals failed, an operator in Baden-Württemberg had the latest CCTV installed in his buses. - With the result that vandalism is now almost nonexistent.

Early in March 2008 more than 100 specialists from seven countries met in the Berlin Ritz Carlton to talk about security on public transport. It was only a few hours after the latest sensational, violent attacks in the Berlin public transport network. A knife attack almost took the life of a courageous Turkish bus driver who had rushed to the aid of two threatened passengers. And at almost the same time a youth in an underground train had kicked a passenger unconscious. This man too had come to the assistance of desperate fellow passengers.

A macabre coincidence, but entirely symptomatic of the increasing violence in the public transport networks. In Berlin alone the 2007 crime statistics show 4759 incidents. That is an increase of 1.1 percent on the previous year. Almost a sixth of all crimes in the Berlin public transport area are crimes of violence. BVG the Berlin transport operator, and the employer of the stabbed bus driver - also confirmed that attacks on passengers, drivers and ticket collectors are becoming increasingly brutal.

The participants in the Berlin conference discussed many aspects of security: including the fight against terrorism, the subjective feeling of security, specific measures against violence. The VBB, the host transport association for Berlin Brandenburg put their argument in a nutshell: that technical aids such as CCTV monitoring help to improve the passenger's feeling of security, but only an increased presence of specially trained security staff would be able to prevent violent attacks.

So increasing the number of security staff in buses and trains, as per the 2000 special forces currently in London - is that the answer? Quite apart from the fact that that would be quite unrealistic in Germany, would that be welcome? Werner Mögle, general manager of Berliner Derovis is sceptical. "The media are already encouraging the impression that the public transport is dangerous territory. A massive squad of armed police would reinforce this impression. With reference to the passengers' feeling of security, I think it would be contra-productive."

The security debate in recent years has tended to narrow down to the problems of violence and terrorism. However, violent crime in public places is just one phenomenon among many. In the public debate it threatens to overshadow the more positive developments. The Berlin statistics show these too. The probability of a passenger being a victim of a robbery or a sexual offence has reduced by 13.1 and 41.3 percent respectively. There is therefore also some good news. And this could be to do with improvements in the security situation which the transport operators in Berlin and other places have themselves brought about. In the last three or four years many public transport operators in Germany, big ones and small ones, suburban and rural, have all invested in mobile CCTV equipment.

There are good reasons for this. Besides the security of passengers and staff there is the particular problem of vandalism. Werner Mögle from Derovis again: "It may be correct that cameras cannot deter notorious violent criminals or murderers. But they are effective in deterring many other criminals, in particular the droves of young drug addicts, paint sprayers and scratchers."

Curbing vandalism

Precisely this group of people are at the top of the crime statistics. A quarter of all crimes in the Berlin public transport area relate to criminal damage. In other towns and cities the picture is similar and in rural areas vandalism is also on the up. Everywhere considerable costs

The Lucifer Effect

"If people in a particular place feel anonymous they often turn to vandalism." This was said by Philip Zimbardo in summer 2007 in an interview with the German newspaper the *Süddeutsche Zeitung*. Zimbardo, a high profile American psychologist has been studying for years why otherwise quite normal people do bad things in particular situations.

His explanation goes as follows: people are not naturally bad or good. They have the potential to be both. The outcome depends primarily on the situation they are in. According to Zimbardo, if they find themselves in a particular kind of environment, almost everyone will do bad things. This happens particularly if there is peer pressure but no external control. Under these circumstances very few have the courage to resist the social pressure. This is the subject of Zimbardo's latest book "The Lucifer Effect" which appeared in German in summer 2008.

If one accepts Zimbardo's argument, then the vandalism in the public transport sector is no surprise. It results from the anonymity in the buses and carriages, combined with the social pressure in the peer group: anyone who doesn't participate in the scratching, spraying and coke-taking is boring and a coward. By removing the anonymity from individuals in public areas CCTV monitoring offers the only available effective protection against vandalism.

are incurred repairing damaged vehicles, and these costs are eventually passed on in ticket prices. It is like jousting with windmills and often enough it only results in more decrepit, less attractive vehicles and rolling stock.

This destructive rage which so infuriates the public transport operators - where does it come from? - It is an interesting question (see box "The Lucifer Effect"). The only certainty is that the public transport operators need to protect themselves. If they are doing this, then it is increasingly with CCTV monitoring. If they are not, then it is often because they fear the passengers' reaction.

"To begin with we were frightened that people would complain," reported Jörg Weinhardt, transport planning and implementation manager with VGM, the Meissen transport operator, which to date has installed monitoring systems in seven buses. However, there have been no complaints; instead reactions amongst customers have been positive. Weinhardt's impression is that "The normal passenger is more worried about damage. In the end he has to pay for that too."

Other companies who have introduced mobile CCTV systems in recent years report similar experiences. Whether in Koblenz or Halle, Freiberg or Halberstadt, Chemnitz or Frankfurt an der Oder no staff can remember receiving any customer complaints about video monitoring. The Chemnitz transport company CVAG went so far as to invite journalists to travel with them in monitored vehicles and to talk direct to the passengers. "I didn't hear of a single negative customer comment and

I haven't since," reported Stefan Tschök, spokesperson for CVAG.

»Video - why not till now?«

When the first monitored buses were introduced in Frankfurt an der Oder the press set up their own reader forum on the subject of CCTV monitoring. Hartmut Huwe technical general manager with Frankfurt an der Oder's transport company remembers one comment in particular, "They were very positive about it and asked why hadn't it happened a long time ago." There were no critical comments.

So is there wide agreement within the travelling public? Jens Wieseke is someone who might know otherwise. He is the deputy chair of the Berlin passenger association, the IGEB. Video is ever present on Berlin suburban and underground rail stations and many underground lines have been equipped with cameras.

Wieseke explained, "We have complaint cards which passengers can use to report their grievances. I am not aware that the subject of CCTV surveillance has been mentioned even once." Wieseke remembers that the Association's initial opinion was, "This is news to us - in particular that serious crime can be solved using video. Unfortunately in Berlin we have people who think that in the public transport system they are out of the reach of the law. And because of this we have finally made up our minds to support video monitoring."

The Berlin Passenger Association wants to see the resolution of violent crimes generate a deterrent effect. And in fact



Everyday life in the underground: a Berlin underground train is unrecognisable with its scratched windows and paint-sprayed doors.

one can assume that each crime on public transport solved with CCTV help has two different effects. It shows criminals and violent people that they will probably be brought to justice for their actions. And each incident which is resolved with the help of video proves to the average traveller that the law does not stop at the bus, train or tram door. It is quite possible that the (mostly tacit) acceptance of CCTV monitoring also has to do with the feeling that this technology is contributing to the re-establishment of law and order. That begins with small things. Peter Baldauf, marketing and sales manager with the Freiberg Railway Company tells of a purse which a passenger had left in a carriage. The passenger reported the loss, whereupon the recordings from the (newly installed) monitoring system were inspected. They revealed that another passenger had picked up the purse. The recordings were handed over to the police for their further investigation.

In Meissen pictures from a night bus helped to catch several people who had apparently stolen wheelchairs just for fun.

The bus driver's attention was drawn to this because after their journey the supposedly handicapped people had simply discarded the wheelchairs. The thieves were identified by the police without eyewitness evidence being required.

Keeping strictly to the rules

They may be little things, but they count as far as the citizen's sense of justice is concerned. For them it is key that monitoring is supporting the law. It shouldn't acquire a reputation for being used as an instrument for spying on citizens or employees. Data protection has an extremely important role here. Who may have access to data and when? How long are they retained? It is right for such things to be regulated - and for them to be communicated?

Jens Wieseke from the Berlin passenger association recommends (new) video system users to go on the offensive early. "They should involve the data protection authorities and political bodies, and of course above all, they should inform

passengers. A good deal of PR is required." It needs to be made clear that the recordings are only used for resolving crimes, and if there is no grounds for suspicion then they are over-written after 48 hours at the latest. Of course the police should also be involved - this too is a confidence-building measure which is well-received by the public (see box entitled "Communicating video monitoring - and doing it properly").

Video should be communicated

CCTV users in the public transport sector have nothing to hide. If there are video cameras everyone can and should know

that. It is good if it is talked about in the town or the region. That gives normal travellers a secure feeling and gives the others a warning. Internal communication though is just as important as external communication. This is of course because video can also be used to spy on one's own staff, as was revealed early in 2008 in the case of a discount food store. Just as CCTV is not there for the purposes of spying on passengers, in public transport, staff also need to be assured that it is not there for monitoring their behaviour.

Jürgen Prinzhausen, general manager of the Eastern Region of VDV the association

Communicating video monitoring – and doing it properly

Anyone introducing CCTV monitoring has nothing to hide. Open communication begins with clear, well positioned notices in the vehicles and rolling stock. And the cameras should be able to see the passengers so that they all know that they really will be recorded.

Besides this it is sensible to publicize the installation. A press release should say clearly where and from when video is being used, and what will be done with the recordings (how long they will be kept, no investigations unless there is real reason for suspicion, close co-operation with the police). The reasons for the introduction should also be made clear: to protect passengers and staff, to enable better investigation of crime, to reduce vandalism.

Those who want to do more in this respect could invite journalists to look round the monitored vehicles and talk to people. An objective report at the outset is much more valuable than any number of management statements. The local newspaper could also be encouraged to set up a reader forum on the subject of CCTV monitoring. Any fear of criticism is usually proved to be unfounded.

After the initial introductory phase, the company might go to the press periodically and offer to write a report about the work of their bus and tram drivers. Police reports about crimes in public transport which are solved with the help of video recordings are also useful. They greatly increase the deterrence factor. Thoughtful public relations pieces can be used to bring the topic of CCTV up for public discussion over and over again.

of German transport operators advises the public transport companies who use monitoring, "What's important is that the video recording is agreed with the unions and the works councils. It must not focus directly on the drivers; it must not make the drivers anxious."

This is best achieved by direct negotiation with works councils. As it was done in HAVAG, the Halle transport company for example, "We concluded an operating agreement which stipulates what can be done," says Uwe Winkler, area manager for vehicle systems at HAVAG. The drivers are not watched by the camera. But it is important to monitor the driver's door. This provides a record of possible attacks on the driver.

In Halle recordings of the road ahead were also ruled out. In Winkler's opinion there are drivers "who feel more secure if a view of the street is not included." Though it would be possible to reconstruct accidents more objectively if such recordings were available. Often the party who causes an accident blames the bus or tram driver. In Winkler's view this is often unjustified and "In most cases the drivers are not at fault."

Axel Wöhlbier, general manager of Halberstadt public transport can report on just such a case. In his trams, each one has a camera set up to record the area in front of the vehicle. "This enables particular conflict situations to be reconstructed. Otherwise there were only subjectively coloured perceptions," explained Wöhlbier. "One case involved emergency braking because of someone crossing in front of the tram. Thanks to the pictures we could reconstruct the incident accurately."

The drivers have to go along with it

Whatever the agreed outcome of the negotiations with the workers' representatives, companies are well advised to keep strictly to it. Ralph Knopp-Keul, transport operations specialist with KEVAG, the Koblenz operator, sums up as follows: "In the final analysis we all rely on the co-operation of the driver. He has to speak up and say something happened." The drivers will only do that if they do not feel mistrustful towards the CCTV system.

The co-operation of the driver is also needed to ensure the responsible use of the monitor. Werner Mögle from Derovis knows this from many conversations. "Companies are often afraid that the driver will be too concerned about what is happening in the bus during the journey and that they will neglect their own real task of driving safely." In trains the driver's monitor has to be automatically switched off when the train starts. But even so, driver monitors are very useful. Werner Mögle explains, "The big advantage is their deterrent effect when people get into the vehicle. At that time the driver can easily watch what's going on behind him at the back of the vehicle."

As far as staff are concerned, companies are often pushing on open doors when they announce the introduction of CCTV. It is no secret that in many places the drivers' fear of attacks is growing. All-night services are becoming less popular. The benefits of recordings are not to be underestimated in terms of achieving a feeling of security. Jörg Weinhardt from the Meissen transport company VGM comments "Using CCTV



Particularly at night, public transport users and drivers often feel terrorised when groups of youths with beer bottles storm a tram and accost the passengers. Drivers who try to intervene to restore peace are often threatened or attacked.

monitoring with an emergency button which ensures the recording is not later overwritten, it's possible to work out what happened. The drivers know that the full sequence of events in the bus can be reconstructed. "That in itself is reassuring."

Gerald Grubbe is a tram driver in Frankfurt an der Oder. In a report in the regional press he spoke candidly about the scary times he has experienced as a driver. "I was pretty scared once when 20 to 30 youths got on the tram with beer bottles in their hands." On CCTV Grubbe is clear, he would welcome it if they installed it on all buses, trams and trains.

Often it is dicey situations like this which trigger 'light bulb moments' among employees. "Where I work a driver was hit in the face a month ago. After that people said that is would actually be quite good if we had monitoring to deter that sort of thing." Reported Ralph Knopp-Keul from KEVAG in Koblenz.

Support from the VDV

The VDV, the German association of transport companies has produced a paper for its members, in which it has gathered

together the details of everything which you need to do when you introduce CCTV monitoring. This includes detailed advice on including employee's representatives, on the positioning of cameras, on the pros and cons of monitors and the signage needed in monitored vehicles and rolling stock. The VDV headquarters in Cologne has set up a working party which deals with the issue. The VDV promotes and supports exchanges between its member companies on the subject of CCTV. Jürgen Prinzhausen from the VDV Eastern region is convinced of the benefits for operators of mobile video systems. "In our view they help to generate security both for passengers and for drivers. They do not prevent all assaults but they make it easier to clear them up. And vandalism is curbed." He voices the unequivocal recommendation "to equip a large number of vehicles".

What vandalism costs

Besides security, the big topic for companies in the public transport sector is damage. Deutsche Bahn, the German rail operator reported in February 2008 that vandals had been causing damage to its rail rolling stock and buildings to a value

of 137,000 euros - per day. In 2007 the cost of damage came to over 50 million euros. Most cases were in conurbations, in the Rhine area, in Berlin/Brandenburg and in Frankfurt am Main.

This comes as no surprise to anyone. But what's the situation in more rural areas? Flattich-Reisen is a medium sized company based in Vaihingen, which operates a dozen or so buses on service routes north-west of Stuttgart. Over the years general manager Christian Flattich has become something of an expert on vandalism on public transport. Since the end of the 90s problems with school traffic has increased reported Flattich. Since that time he has kept a record of the increasing vandalism, with his drivers filling out a report sheet after each school journey.

The "Cool to School" project

Flattich decided to do something about it. In 2003 he called together other bus companies, youth and education services, the regional parents council and the police to set up the "Cool to School" project, providing talks and special training for fifth year pupils. A model project. Flattich did indeed see a decline in damage - but only by about 15 percent. "The damage caused by vandalism on our 13 buses varies between 17,000 and 22,000 euros a year. These costs are still much too high and not sustainable," complains the bus operator.

In 2007 Flattich-Reisen turned to CCTV. The test phase is still in progress but the proprietor has already established that "Vandalism has reduced to almost zero because of CCTV monitoring."

The proof: video works

In Chemnitz too they wanted to know - and tested out - the effect of CCTV monitoring with a proper test procedure. Stefan Tschök from CVAG reports, "At the end of 2006 we fitted one "Variobahn" articulated rail vehicle and one articulated bus with a CCTV system. At the same time we identified two identical reference vehicles. After three months we made the first thorough comparison of the four vehicles. Those without the new equipment were severely affected, especially by large areas of scratching. The monitored vehicles on the other hand still looked like new."

Very few companies are as systematic as CVAG but all video users have the same experience: there is less damage on monitored vehicles. Deterrence does work. And the subsequent pursuit of the remaining "video-resistant" vandals also helps. "After damage has occurred we act immediately. We look for the culprit using targeted analysis of the recorded material and involve the police," reports Uwe Winkler from HAVAG in Halle. "Besides this we are very scrupulous to remove or repair the first signs of any damage as soon as it has been spotted.

Take recourse against culprits

If the culprits are identified then the company can demand recompense for the damage - and that too is a legal deterrent measure. That's the opinion of the rail operator Freiberg Eisenbahn, "We also keep an eye on the ticket machines. They sometimes get sprayed with beer or have pointed objects pushed into the coin slot," says Peter Baldauf, sales and marketing

manager. "Components like that cost 300 euros. So we try to reclaim that from the culprits."

Of course CCTV monitoring cannot completely eradicate vandalism from the world. Again Uwe Winkler from HAVAG: "Video is not turning local transport into a paradise. But severe damage is quickly reduced. "The rest is a matter of calculation: on the credit side how big are the savings, how big is the estimated benefit of having undamaged, inviting vehicles? And on the other side how big are the costs of acquiring and maintaining video surveillance?"

Investing in robust systems

At HAVAG after earlier, rather patchy experiences with technology which was prone to breakdowns, the company has now opted for professional recorders from a medium sized German supplier. Besides the general impression of robustness, the decisive factor was the facility to record onto flash media rather than hard disks. Flash storage is less susceptible to mechanical stress and temperature variations. It can be used straight away and it can't crash. "We hope that this will give us a considerably longer service life and a near zero failure rate," says Raik Klose, group technology manager at HAVAG. The new recorders have been in operation for more than six months without any problems.

This point is not unimportant. If something has happened and later investigation shows that the CCTV system had not

recorded it, then that guarantees a bad press. Digital recorders used in mobile situations have to withstand quite a lot - so it is as well to use professional and certified quality products. Especially if they are affordable. A 12 metre bus can be fitted out with a robust monitoring system for 2,000 to 2,500 euros, an articulated bus for 2,700 to 3,000 euros. 4,500 to 5,000 will equip a tram set or a double ended train.

In politics, realisation is growing

The realisation that mobile CCTV monitoring can help to control problems of violence and vandalism in the public transport sector is now spreading across party boundaries. This was stressed by Holger Hövelmann, SPD minister of the interior for Sachsen-Anhalt at a special conference in Magdeburg, in his support for the sensible application of this technology. When asked, a speaker for the Sachsen-Anhalt Ministry for Regional Development and Transport confirmed that the new investment subsidies in the public transport sector are to be linked to CCTV monitoring.

Of course it is still a long way until earmarked subsidies are granted everywhere. But political consciousness is growing with each further act of violence on local public transport. The two violent incidents in Berlin buses and trains mentioned at the beginning of this article have now been cleared up. Three suspects are being held on remand. The underground kicker was identified with the help of a video picture.

Dr. Thomas Hake

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