

# Electronic Monitoring: exploring the commercial dimension

Mike Nellis looks at how a company grew with the expanding use of technology in corrections.

The electronic monitoring (EM) of offenders is of growing significance across the world.

Although loosely understood to be part of 'the commercial corrections complex', the companies involved in manufacturing this new technology have been largely opaque to criminologists and penal reformers. This paper, part of a larger work in progress, goes some way to demystifying one of them.

Dmatek (pronounced D-M-A-tek) was founded in 1990 in Israel by three information technology entrepreneurs to develop software for a range of emerging markets – e.g. flight simulators, smart houses. In 1992, having recognised the commercial potential of new technologies which enabled the "electronic monitoring of moving objects" (Annual Report 1996) in a variety of contexts, it decided to shift into product manufacturing (and "business development support" for its customers). Several different products were considered until, following an assessment of American correctional issues it decided to risk all on the electronic monitoring of home detention. At that time, this emerging market was seen as having no one company that dominated it (although BI, of Boulder, Colorado, was making headway in this respect) – and in which a small, new company could profitably operate. Dmatek formed a subsidiary company, ElmoTech, to "make a difference" in this field. For practical purposes here, I will treat them as a single entity within 'the electronic monitoring industry', a term they themselves use.

ElmoTech's initial customers were independent service companies, not state governments or law enforcement agencies. It did not see itself as having expertise to work with these, preferring to supply products to service companies (mostly in the private security business) who contracted services to law enforcement agencies. It expanded steadily in the US, then, as EM developed elsewhere, in Canada and Australia. Its first European contract was in Sweden. This was all ample confirmation of Dmatek's judgment that a worldwide monitoring market was emerging.

"Electronic monitoring based applications will provide better, faster and more cost-effective solutions to everyday tasks and enable services which are not available today for lack of technological means. We expect the use of electronic monitoring in the corrections market to grow faster in the coming years – as the need is evident, as the system is proven to be cost-effective and the solution

is becoming accepted in more countries around the world" (Dmatek, 2003).

The term 'electronic monitoring' now encompasses a range of different products – radio frequency curfew tagging, remote alcohol monitoring, voice verification, GPS tracking – each of which is constantly being refined and upgraded. All are dependent, to a greater or lesser degree, on technical developments in the broader telecommunications infrastructure and industry – the chips, circuits, software and tiny batteries used in telecommunications are specifically customised for EM purposes. ElmoTech has developed its own patents to make monitoring equipment 'tamper' and 'spoof' (deception) proof – a crucial and sometimes cost-increasing ingredient of kit which offenders may well resent wearing. The largest proportion of Dmatek/ElmoTech's 100 staff are employed in research and development. Development itself takes place in conjunction with correctional agencies and the independent service companies. The latter identify needs, or specify what they would like to do. ElmoTech develops solutions, and says what is technically and commercially feasible at a given time, in a given place. Crucially, and unlike other equipment providers in the industry, it also provides comprehensive support services once EM systems have been installed, quickly sending out staff from its Tel Aviv HQ. This has undoubtedly enhanced its reputation among customers. Correctional developments involving EM are thus a complex mix of technological, commercial and political factors – of which the political is probably the most important. EM is not a technologically-driven development *per se*. The demands for solutions come from governments and law enforcement agencies and ElmoTech would not develop products for which there was no market. However, products developed specifically for one market/country can then be shown to other countries, who may then decide to opt for that technology themselves – in that sense their decisions *are* technology-led, and might not otherwise have been made.

The USA was the pioneer market for EM and, numerically, remains the largest in the world, with approximately 100,000 people tagged daily. The prison population remains notoriously high, at just over 2 million, and while there is no determined federal strategy to reduce this – indeed no great public demand for it – a number of states and counties have seen in EM the possibility of reducing the high cost of incarceration at a local level, even if only in a

marginal way. Dmatek's annual reports nonetheless reflect the fact that the US remains a complex and volatile market in which to work (Dmatek, 2002).

By June 2000 Dmatek/ElmoTech operated in 14 countries and was valued at £50m on the stock market. In that year it expanded into Singapore – the one obviously authoritarian state in which it works – taking custom away from BI, who had been Singapore's first contractor. It also founded another subsidiary, HomeFree Systems, to cater to the emerging telecare market – the use of EM technologies to monitor movement and lifesigns in elderly and disabled people, so that they can be managed in their own homes rather than in hospitals or residential care. Political events then served up another potential market to the EM companies, insofar as post 9/11 developments in the USA increased the American government's desire to subject certain of its residents to surveillance (Rosen 2004). Dmatek's 2003 annual report acknowledges the significance of this (p. 6).

The European market for EM expanded significantly post-2000, building on ElmoTech's early commercial successes in Sweden and the Netherlands. At least initially, this reflected concerns about the costs of imprisonment rather than 9/11-derived security concerns. Scotland, Spain, Catalonia, Andorra, France, Germany, Belgium and Portugal all became ElmoTech customers. Thus, while Dmatek's American revenue for 2003

interest in creating a market which massively favours the supervision of offenders in the community. Dmatek, in particular, have inmate monitoring technologies which can be used inside prisons ("online headcounts"), as well as an array which can be used outside. They regard the "entire prison market" as potentially open to them. Whatever the direction of penal policy in any particular country or territory – whether prisons are contracting or expanding – Dmatek/ElmoTech, have a product to sell.

Nonetheless, it is not quite inevitable that the worst will come to the worst, for *among* the options created by EM is indeed the practical possibility of reduced prison use and community penalties which better balance the ideals of rehabilitation, reintegration and public protection than has been possible in the past. In the emerging penal landscape of the 21st century, penal reformers have a twofold task, one old, one new. They must indeed preserve and articulate the compassionate, humanistic values that have always been the bedrock of the case for reduced prison use, and of proportionality in sentencing. But they must also become fluent in understanding the new technologies that now affect their field of operation, and to that end, they must engage organisations like Dmatek/ElmoTech in dialogue. If they don't, they will be marginalised. EM technology will simply not go away, and there should be more than one

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decreased by 11% in America – although that country remains its largest market in terms of operational EM units – its Europe revenue increased by 17%, with further expansion anticipated into new countries, and with new products for existing companies (Dmatek, 2003).

Dmatek's optimism about the future of electronic monitoring in law enforcement is indicative of major cultural changes in western correctional systems, which vary in scope and intensity in different countries, depending on their particular penal traditions. Even though these changes are not directly driven by commerce and technology, the fact that electronic solutions are being looked to suggests a certain level of disillusion with traditional means of community supervision, whether as court-ordered penalties, or after custodial sentences. The disillusion seems particularly marked with probation, which is struggling to prove its worth and credibility to politicians in terms of efficiency and effectiveness, and whose humanistic, people-centred values can easily be made to seem anachronistic in a modernising, managerial, technophilic world. This attitude towards probation is perhaps most obvious in England and Wales and it is perhaps no accident, in European terms, that we have shown the greatest degree of strategic commitment to EM. What is done here is watched with interest elsewhere.

Penal reformers may draw only gloomy conclusions from this, and there are – beyond a shadow of a doubt – grave dangers ahead. Depending on the political signals they are given 'the electronic monitoring industry' will be able to develop ever more sophisticated surveillance technologies, for offenders and others. The industry cannot be assumed to be *intrinsically committed* to reducing prison populations, or to have a major

political voice saying how it could and should be used. The 'commercial' and the 'humanitarian' are undoubtedly very uneasy bedfellows, but they do not have to be perpetual enemies – and whilst not necessarily seeking them out, the companies are not deaf to ethical arguments. Until they at least *try* to talk with these companies, penal reformers will never know what they can achieve, or indeed what some of the progressive options are.

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#### References

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*Data for this paper was collected from www.dmatek.com, from interviews with and presentations by ElmoTech staff at their tenth-anniversary-in-Europe conference in Italy, October 2004, and from an interview with Yoav Reisman, CEO of Dmatek, in London in December 2004. I thank them all for their help.*