BRITISH BROADCASTING CORPORATION   RADIO 4

TRANSCRIPT OF "FILE ON 4"- 'ID CARDS'

CURRENT AFFAIRS GROUP

TRANSMISSION: Tuesday 31st July 2007   2000 - 2040

REPEAT: Sunday 5th August 2007   1700 - 1740

REPORTER: Sarah Spiller

PRODUCER: David Lewis

EDITOR: David Ross

THE ATTACHED TRANSCRIPT WAS TYPED FROM A RECORDING AND NOT COPIED FROM AN ORIGINAL SCRIPT. BECAUSE OF THE RISK OF MISHEARING AND THE DIFFICULTY IN SOME CASES OF IDENTIFYING INDIVIDUAL SPEAKERS, THE BBC CANNOT VOUCH FOR ITS COMPLETE ACCURACY.

"FILE ON 4"

Transmission: Tuesday 31st July 2007

Repeat: Sunday 5th August 2007

Producer: David Lewis

Reporter: Sarah Spiller

Editor: David Ross

ACTUALITY AT PRIME MINISTER'S QUESTIONS

BROWN: It is his party that continues to oppose identity cards, and I may …

SPILLER: Gordon's Brown's first Prime Minister's Questions, facing opposition leader David Cameron, in the aftermath of attempted attacks in London and Glasgow. And he gave a renewed commitment to an ambitious and controversial Government scheme.

BROWN: It is because the situation has changed that more and more people have come to the view that is taken by his security prison expert and taken by Lord Stevens that we need identity cards, and I know that there are many people on the Conservative back benches who believe exactly the same as we do.

SPILLER: The Government says its new identity card scheme will not only help in the fight against terrorism, it'll tackle fraud, illegal immigration, and improve access to public services. But a File on 4 investigation has revealed confusion at the heart of this project. Insiders tell us about uncertainty and lack of detail from the

SPILLER cont: outset. We hear about rising costs – and costs not yet accounted for. And a leading academic tells us of his fears that the entire ID programme could founder within three years – because the Government simply hasn't understood the technology.

SIGNATURE TUNE

ACTUALITY OF STREET MUSIC IN COPENHAGEN

SPILLER: Copenhagen in Denmark, and a musician moves between diners enjoying the summer sun. But what's happening a few streets away from this bustling city centre is one of the first steps in the UK Government's identity revolution.

ACTUALITY IN EMBASSY

WOMAN: So you want to apply for a two year visit?

MAN: Erm, I want to apply for a visit …

SPILLER: Tucked away in a small annexe to the British Embassy, staff are taking people's biometrics. Biometrics are a unique physical characteristic, like a fingerprint, which can be used to establish identity, and the people gathered here are non European citizens who want to travel to the UK. Today a family's arrived, armed with their documents. They get their fingerprints scanned.

WOMAN: Okay, if you could put your right hand finger, four fingers of your right hand…..and push down … that's brilliant. Then your left hand…four fingers….lovely, and then two thumbs.

SPILLER: The fingerprints, along with the man's picture and passport details are then sent down a computer line to London. There, they're checked against a database set up in the early 1990s - a record of people who've claimed asylum in the UK or who may be known to the immigration service.

SPILLER cont: Behind the glass counter thatseparates embassy staff from their customers, a computer screen whirrs into action. And Frazer Thomas, the entry clearance officer, checks the man's details.

THOMAS: You can see at 10.21 his biometrics information – so the photograph, the fingerprints and the information – his name, date of birth, nationality – was recorded here in Copenhagen and sent back and received by the database in the UK also at 10.21, so that's pretty instantaneous. Five minutes later we've received a reply there saying no match. That means his fingerprints and his biometric details are not held by the database in the UK, so I know for sure, as an entry clearance officer, that he hasn't committed any immigration abuse in the past that we are aware of, so that gives me confidence before I speak to him that, you know, he's got a clean bill of health.

SPILLER: The embassy in Denmark started using the biometrics scheme last September and it's being introduced in all Britain's embassies issuing visas. In Copenhagen they say they've already uncovered around thirty cases of immigration fraud.

THOMAS: One case comes to mind where a man came in to apply for a visa, it wasn't his first visa application – indeed he had had twelve before. He had a business here in Denmark, wanted to go visit his brother in the UK. His passport indicated frequent travel to the UK. It seemed a very credible application and a very straightforward one. But with his biometric information, it showed that he had previously claimed asylum in the UK under a completely different identity. Using that new identity, we were able to do checks in the UK and discovered that under his second identity he was claiming benefits in the UK. It's possible that he went each month to sign on or to show up to collect his benefits. It was up to £30,000 a year of benefits that he was not entitled to.

SPILLER: So he was defrauding the taxpayer?

THOMAS: It appears so.

SPILLER: And what happened to him?

THOMAS: He denied repeatedly that he had been to the UK and claimed asylum before. But with the fingerprints it was a considerable amount of evidence, and after I explained that to him, he finally admitted that yes, it was him. So I refused him the entry clearance and the Department for Works and Pensions are looking at his benefits claims and perhaps look at prosecuting him for fraud.

SPILLER: At present what's happening in Denmark – taking fingerprints, checking them against computer records - is confined to those who want to apply for a visa to come to Britain. What the Government plans for the new identity card scheme is of a completely different order. Under the new Identity Cards Act, information about every adult in Britain will be stored on Government databases that'll form a huge new National Identity Register. The details will range from biographical information like name, address and date of birth to an individuals biometrics – like fingerprints. Alongside this are the new identity cards.

ACTUALITY AT OFFICE

SPILLER: Peterborough in Cambridgshire. And in offices like this one, the beginnings of the UK National Identity Scheme. When people come here to get a new passport, they'll now face a range of questions designed to check on their identity. This interview process will eventually become part and parcel of the ID programme. Fingerprinting will be introduced in 2009, when the first ID cards are issued. The scheme is run by the Identity and Passport Service, an agency at the Home Office, and the Chief Executive is James Hall.

HALL: The core of what we're about, the core rationale for what we're doing this, is to provide individuals with a secure means of protecting their identity and subsequently very easily and quickly and reliably being able to prove their identity when they need to do so, whether that be travelling, whether it be opening a bank account, taking out a loan, dealing with different government agencies, we're creating a capability for individuals which have a wide range of uses across the public and private sector.

SPILLER: From the moment the ID scheme was first mooted, there were bold promises about what it might deliver. But industry insiders have told File on 4 about confusion and uncertainty at the heart of the ID card programme from the very early days, a lack of detail about how the new database might be built, and a lack of response from Government officials and civil servants when they asked questions. Peter Tomlinson, an IT consultant and specialist in smart card technology, attended Government meetings where the identity programme was discussed. He was puzzled when officials from the department running the new project didn't appear to be present.

TOMLINSON: The meetings were called by people in Cabinet Office. There were topics on the agenda which were set by people in Cabinet Office, and we kept on thinking, why are we not seeing people from Home Office, why are we not seeing technical people from Home Office or people involved in technical management? Eventually they began to come along, but they never produced anyone who had any technical understanding of large-scale systems which are largely driven by IT. We were just completely puzzled.

SPILLER: What sort of questions were being asked at these meetings? What sort of things were people saying?

TOMLINSON: Other Government departments were asking the basic question, how will we use this system, and never getting an answer.

SPILLER: No answer at all?

TOMLINSON: No answer at all. It was as simple as that. It was my first real introduction to silo Government, that the individual Government departments were completely independent of each other and now they were going to have to start to work together, but they just did not start to do it.

SPILLER: Neil Fisher is a Vice President of Identity Management at Unisys, one of the companies who hope to join consortia bidding for the new ID scheme contracts. He was talking to the Home Office about other computer projects he was involved in, which he felt should have fed into the identity scheme. He too criticises a lack of co-ordination. He says it was difficult to find out who was in charge.

FISHER: I think there's been a realisation as they've gone through this that there are a lot of projects, even within the Home Office, being run by awful lots of different and smaller divisions in perhaps Immigration, in law enforcement, in passport and in the ID cards, all of whom have some sort of relationship which was ill-defined. So going to a meeting, invariably the wrong person from the wrong department would be there, who couldn't speak for their colleagues and some other silo.

SPILLER: That must have been a bit frustrating.

FISHER: Yes. Industry always likes to sort of talk to, you know, a well organised chain of command where you can cascade information right down, it's marvellous, but it just isn't like that. I'm not really giving away any secrets here. The Home Office is quite a difficult department to run, and if you like, the Home Office is really like a herd of cats and it's very difficult to herd cats, as you know.

SPILLER: Other suppliers have told us of concerns that officials seemed to have a broad brush approach to how the ID card scheme may be put together. Peter Tomlinson said that as he sat, listening to officials discussing the ID project at the Cabinet Office meetings, he began to wonder whether it had really been thought through.

TOMLINSON: We were asking questions, questions like how does one Government department that's not Home Office connect up to the identity card system? Where are the communications lines? Where are the specifications for the communications protocols? How does the equipment get to be security certified? There was no work going on, on any of these technical topics.

SPILLER: So you just got a blank response, did you?

TOMLINSON: Yes, yes. If you are going to design a large-scale system like this, you first go and look at the volumes of transactions that are going to take place, how often are they going to take place, and then we would see roughly how big it was going to be. You can't specify a system unless you have got these figures. There were about four of us who used to go to those meetings and we were all very puzzled. We basically said that this project is empty, it has no content.

SPILLER: By summer last year, an influential committee of MPs had turned their attention to the identity card scheme. When the Science and Technology Committee published its report, some of the conclusions were highly critical of the way this project had been handled. It said the Home Office's approach had been 'inconsistent'. It was unclear who had responsibility for the IT element of the project.

READER IN STUDIO: It is unsatisfactory that the boundaries of the scheme still seem not to have been set. We have the impression that the Government still does not know precisely what it wants from the identity card scheme.

SPILLER: At the same time this report was published, a damaging leak in the press outlined civil servants' concerns about how the project was proceeding. Bill Goodwin, a journalist at Computer Weekly, has been following the twists and turns in the ID card story.

GOODWIN: There were leaked emails that appeared in the press from civil servants, showing that they were really quite worried about the project. They felt it was being bolted together in a sort of Heath Robinson way, they were worried about whether it would be successful, whether the whole thing, in fact, might actually die a death and be very embarrassing for the Government. The new Home Secretary at the time, John Reid, came in, put the whole project on hold, carried out a complete review of it, and what's emerged since then is a very much slimmed-down ID card project. It's still called ID cards, there's still something that will appear that will be called ID cards, but in a sense it will be a shadow of perhaps what we were originally led to believe by the Government.

SPILLER: In fact, the ID card scheme has undergone a radical overhaul.   When the Home Office published a new action plan for the project last December, there were key changes. One of the early proposals was for a new, purpose-built database to store the information that would be put on the National Identity Register. This idea was shelved. Instead the scheme is to use three existing Government computer systems. Another plan had been to use biometric measurements of people's iris patterns as a means of securing identity. This plan was dropped too. James Hall took over at the Identity and Passport Service two months before the Home Office published the new proposals. He says it was natural that the scheme would change over time.

HALL: The scheme has been through a process of refinement and improvement, which was what we published in December. This is something that's going to continue to evolve into the future. You would have every right to be critical if we weren't continuing to evolve and develop the scheme.

SPILLER: Industry insiders have told us that in early meetings about the scheme with the Home Office, it was very difficult to get answers about what was happening. We've heard about meetings at the Cabinet Office, where Government departments were asking, how will we use the system, and not getting much of an answer.

HALL: We have published a plan laying out our approach to the National Identity Scheme last December. Since January we have been in continuous dialogue with the technology industry. We have taken on board some of their thinking about the shape of the scheme and that will be reflected in the procurement activity, and I have no doubt once we get into the procurement process we will continue to get innovation and good ideas from the market which will continue to refine our thinking about the precise details of how we deliver this.

SPILLER: The project has been talked about since 2003. Shouldn't civil servants have taken the project in hand at that point? It would have saved a lot of money, wouldn't it?

HALL: Well, I obviously can't comment on things that happened long before I became involved in October of last year.

SPILLER: But despite changes to the scheme – and despite the Home Office's new strategic action plan, outlining a timetable for pressing forward with the programme – for some in the industry there are still fundamental issues yet to be addressed. Professor Martyn Thomas is an independent consultant software engineer and fellow of the British Computer Society and of the Institution of Engineering & Technology. He attended a meeting early this year to hear a Government minister outline the latest proposals for the ID project.

THOMAS: I raised a question about the requirements as did many other people in the audience. It was an audience that contained a number of people

THOMAS cont: from the supplier industry, and they are also very concerned about getting clear requirements because they don't want to be associated with yet another project that turns out to attract a lot of publicity for going badly wrong.

SPILLER: What sort of questions were they raising at that particular meeting?

THOMAS: All sorts of serious systems engineering issues which were well understood in the engineering community, but I suspect are not properly understood by the ministers who are formulating policy.

SPILLER: And so at that meeting these questions were raised. What was the response and what did you make of the response?

THOMAS: It's the nature of these sorts of meetings that you don't get direct responses. It does seem bizarre that the requirements are still not being clearly articulated. We have been raising the issue again and again, but without a very clear statement of what the requirements are, it won't be possible to build a system that meets those requirements cost-effectively.

SPILLER: The process of procurement – in which suppliers are invited to bid for Government contracts as part of setting up the ID scheme – is expected to start within weeks. And since the start of the year, the Identity and Passport Service has held a series of meetings with suppliers and industry representatives. These so-called market soundings have been organised by an association called Intellect. Nick Kalisperas from Intellect is much more positive about progress being made in nailing down the details of the project, but he concedes there are still issues his association are waiting to clarify. One of them is how Government might join up when it comes to the ID scheme. Have suppliers been told how other Government departments may use the National Identity Register?

KALISPERAS: Only in so far as discussions are currently taking place. The specifics around those discussions haven't been divulged to the suppliers yet.

SPILLER: What do you mean, the specifics? What sorts of things?

KALISPERAS: Well in terms of, you know, what the current thinking is from those departments and whether they're interested in using the scheme, etc. That sort of level of detail hasn't been made available to suppliers and, to be honest, nor would we expect it to at this stage.

SPILLER: There's a lot of detail in this that hasn't really been sorted out, isn't there?

KALISPERAS: I think there's some things that haven't been sorted out. I think the important point to make is that there is obviously a level of detail that we, as suppliers, aren't aware of for reasons of confidentiality.

SPILLER: Ministers have suggested the ID scheme could bring huge benefits across Government. It will not only provide an easy and reliable way for people to prove their entitlement to public services – use of the system, for example, at the Department for Work and Pensions, could help reduce fraud. In their strategic action plan last year, the Home Office suggested that the Government ID scheme will 'realise the goal of truly joined-up personalised Government'. But this depends on different Government departments signing up to the ID project. Bill Goodwin at Computer Weekly says that if other departments do want to connect into the scheme, they'll have to pay for changes to systems.

GOODWIN: The difficulty they face is that they are using a computer system developed for one purpose and then trying to adapt it for a different purpose. If other Government departments are planning to check your identity, they will have to buy the hardware necessary to do this. That's an additional cost, it's not factored into the ID card programme. So if it is used on the scale that Government would let us believe that it is going to be used, a lot more money will have to be spent, but that will come out of individual Government departments' budgets.

SPILLER: We asked James Hall at the Identity and Passport Service whether there were any estimates from different Government departments on how much it might cost them to be part of the ID scheme.

HALL: There aren't a formal set of costs. A number of Government departments have done preliminary work, both on the costs and on the benefits that will accrue, and other departments will do that work in due course for structure.

SPILLER: But you're going out to tender on this. Surely you need to know how much it's going to cost Government departments?

HALL: Well no. The costs that we have produced have been the costs of producing identity cards and the procurement process that we're about to start is a procurement process for the production of identity cards, the maintenance and management of the National Identity Register and the enrolment of UK citizens onto that National Identity Register.

SPILLER: When we can see the figures on how much it's going to cost Government departments?

HALL: It'll happen many times as part of the natural process of them overhauling and enhancing their systems anyway. That's the way that it would be logically planned to do it, part of the recycle and refresh of their long term technology.

SPILLER: That's another way of saying, isn't it, that there's no hard and fast figures, the work simply hasn't been done yet?

HALL: I would quite willingly admit that we have not yet, and the Government have not yet produced costs for every single department, because I think it's something departments have got to do in due time when it's appropriate for them.

SPILLER: But it's a bit difficult though, isn't it, to say that there are going to be lots of cost benefits from the ID card scheme, when these different Government departments haven't actually outlined the costs of integrating into the system? It's all sort of hot air really, isn't it?

HALL: No, I don't think so. I think a lot of the specific benefits are quite easily identifiable and don't necessarily involve massive investment in information technology. For example, using an identity card as proof of identity in a range of situations doesn't necessarily involve any technology investment.

SPILLER: The question of what the costs of the scheme may be, as it unfolds over the next ten years, has led to pressure on the Government to publish reports carried out at the inception of the ID project. Under the Gateway Process, the Office of Government Commerce examines Government programmes during their life cycle. They look at whether schemes have realistic expectations, what expenditure might be, what resources might be needed. But despite considerable pressure, the Government's been resisting all attempts to publish the reviews on the identity card scheme.

DZIECIELEWSKI: I would like to see what these Gateway reviews say exactly, just to see if they've missed something important. It's not asking for state secrets, there's no people's lives that would be put at risk by revealing this information.

SPILLER: Mark Dziecielewski is an opponent of the proposed ID cards and a civil liberties campaigner. His interest in the Gateway reports began when he went to hear the then Home Secretary, David Blunkett, giving evidence about the ID scheme to a committee of MPs back in 2004.

DZIECIELEWSKI: The striking thing was that the Government side could not give an estimate of the cost of the scheme, even to the nearest billion pounds, and they were asked that about half a dozen times by the chairman. They did mention that the project had been through a formal review process by the Office for Government Commerce, which is part of the Treasury, and that there was something called a Gateway review report.

SPILLER: And had you ever heard of a Gateway review before?

DZIECIELEWSKI: Yes, I had heard of Gateway reviews. They start off by checking out the fundamentals of the project, what is it you're trying to achieve, and then they build up at the later stages to deal with value for money at the end.

SPILLER: Using the Freedom of Information Act, he put in a request to see the reports. He met a stone wall.

DZIECIELEWSKI: They told me that they wouldn't release the information, citing one of the many exemptions under the Freedom of Information Act and dealing with advice to ministers. Since I wasn't satisfied with that then I asked for an independent review of the handling of the case, which took a few more weeks, at which point, come April 2005, I made a formal complaint to the Information Commissioner, asking him to investigate the request. By mid 2006, the Information Commissioner had actually been refused sight of these documents, they were so secret within Government. A couple of his staff were then allowed to go and inspect them, and I think eventually he got hold of a copy and then issued a Decision Notice, saying essentially publish everything, disclose everything, the public interest is best served by full disclosure. Even after that, when most people would have published, the OGC appealed to the Information Tribunal to review the Information Commissioner's decision and they then produced a judgement upholding the Information Commissioner's original decision of saying publish, disclose everything. At the very last moment, the Office for Government Commerce has now appealed to the High Court.

SPILLER: Mark Dziecielewski is still waiting to hear when the court case might happen. During the course of this long saga, his attempts to get access to the Gateway reports have been supported by MPs. The influential Public Accounts Committee has also called for Gateway reviews to be released. So how does James Hall, Chief Executive at the Identity and Passport Service, explain the continued refusal to make the documents public?

HALL: Gateway reviews, and that's not just for the National Identity Scheme but across the whole of Government, are internal management tools which projects use to …

SPILLER: But the Information Commissioner has said it should be published. An Information Tribunal has ruled that they should be published. What's the problem?

HALL: Well, I think the Government has taken a position not just on the issue of the National Identity Scheme but across the bases that Gateway reviews are designed as an internal management tool, that their value is directly driven by the frankness with which reviewers can comment on the basis that it's a tool for management to use to help deliver projects. But if it starts to become the norm that these Gateway reviews are always going to be published, what will happen is people will feel less able to be frank in their commentary.

SPILLER: Given the controversy over the ID card scheme, it's hardly surprising that there are acute political sensitivities over costs. And the issue of what the final ID card bill could be in the future has been the focus of fierce debate – in and out of Parliament. It's also led to open warfare between the Government and the academic institution, the London School of Economics. The Home Office originally put the costs of the ID scheme at £5 billion. But when academics at the LSE published a report suggesting the costs of the project could be as high as £19 billion, Dr Edgar Whitley says their work came under a sustained attack.

WHITLEY: Some of the difference was simply we were measuring slightly different things. We were including the cost to Government as a whole, whereas the Government figures seemed to be based on the costs to the Home Office. We also had more, as it were, sceptical views of the likely costs of many of the different parts of the scheme, and so we produced a range of estimates – the low cost, a medium cost and then a high cost if all sorts of things went horribly wrong and were more complicated and more expensive than the Government had predicted.

SPILLER: And of course the Government came back and said that your report was confused, it was based on misguided assumption, that you had inflated the cost estimates. They were highly critical of some of the details of that report as well, weren't they?

WHITLEY: Yes, and dismissed the report, even though this was a three hundred page plus detailed report.

SPILLER: This was a big battle, wasn't it? Were you surprised by the strength of the Government's response?

WHITLEY: We were lucky that we had complete support from the Director of LSE, who stood by our right to form an academic opinion about such a significant issue, and were encouraged to keep on with our research and keep watching the project as it developed.

SPILLER: By law, the Home Office is obliged to publish the costs of the scheme every six months. This May they revealed that, despite cutting back on the programme, the figures had risen by £400 million. And Dr Edgar Whitley from the LSE says that raises yet more questions.

WHITLEY: In December 2006, the Home Office announced a major redesign of the scheme to reduce this cost and to reduce the risks of the scheme, and yet, despite the cost report stating that it included all of the cost adjustments that this new plan included, the costs had not actually gone down, they'd actually gone up, and that's the bit that we couldn't quite make sense of.

SPILLER: So in effect this new plan had suggested there may be cost savings, but you couldn't find them anywhere. Is that a …?

WHITLEY: Yes, that would be a fair way to describe it.

SPILLER: James Hall at the Identity and Passport Service, told us that as the scheme gets underway, costs could still change – and this might mean they will go down or up.

HALL: When I arrived in the job in October, I took a look at our planning assumptions and I concluded frankly that although we believed long term we could save money and reduce costs – and I still believe that to be the case – that we had an overly aggressive profile of staff savings and I made some adjustments. And you should expect to see, I think, movement up and down over the next few years as we go through a procurement process, finalise and clarify prices of what we're going to be charged for different things.

SPILLER: How much up and down? I mean, the LSE have suggested the cost of the scheme could rise to as much as £19 billion. So what are we talking here about ups and downs?

HALL: We should put the cost of the scheme perhaps in context. What we've been talking about is a figure of in the region of £5.5 billion over the next ten years. That averages out at about £550 million a year. Now last year the cost to the Identity and Passport Service, excluding any work on the Identity Cards Programme, was about £325 million. So the incremental costs over this period are just over £200 million, for which we get both an identity card scheme and a series of significant developments and enhancements to the passport.

SPILLER: But beyond the apparent uncertainties over costs and over the details of how the system may work, there is an even bigger question. A leading academic has told File on 4 that he believes the ID scheme could founder as a result of the decision the Government made not to use iris scans.

ACTUALITY OF IRIS DEMONSTRATION

ELECTRONIC VOICE: Please look into the mirror. Thank you for your cooperation.

SPILLER: At the offices of a company in Aylesbury, manufacturer Imad Malhas demonstrates a machine that scans people's irises. These textures are then converted into mathematical data.

MALHAS: It has taken the image and now it's searching a database of one million simulated records far away from here, and as you can see it found my name and my left iris, and I can do it again with my right iris, but you can see it's a million records in the database.

SPILLER: And how accurate is it in establishing identity?

MALHAS: It is so much higher in accuracy that it is not measured in terms of 99.9999. I can go until tomorrow saying these nines and then point two after it.

SPILLER: So are you saying, obviously you are saying because you are one of the manufacturers of this technology, that is it superior to, for example, fingerprints and facial recognition?

MALHAS: It's not that we are saying. Studies have been done worldwide that prove iris recognition is more accurate and faster.

SPILLER: And this is not just the opinion of a manufacturer. The mathematical process which lies behind the iris biometric technology was invented by Professor John Daugeman at Cambridge University. He's a reader in computer vision and pattern recognition. And Professor Daugeman predicts that if the UK ID scheme simply relies on fingerprints to match identities against a national register, the system will break down. According to his calculations, by the time six million people are enrolled on the National Identity Register – it could start to collapse as the rate of false matches – people linked to the wrong identities - starts to increase.

DAUGEMAN: Typically what you expect is that, if you have a database of say six million people, the false match rate against them will be about one in a thousand and the true match rate is something like 95%. So this means that by the time the UK system had enrolled say six million people, which means maybe two or three years into the rollout, about one new person in a thousand new people will be making false matches against the database. As the system grows from six million to seven million people – that's adding another one million people, a million is a thousand thousand – one in a thousand is making false matches. That means you would be getting a thousand false

DAUGEMAN cont: matches in the period that the system is growing in the enrolment from six million to seven million, and then it snowballs, it gets worse and worse and worse, and the number of comparisons that are being made is becoming more and more all the time, and so the false match rate problem would really start to balloon. So my prediction would be that, by the time you've enrolled about six million people or so you will start to see a really troublesome number of false matches.

SPILLER: And what would that mean for the individuals involved and what would it mean for the scheme as a whole?

DAUGEMAN: Well, for the scheme as a whole it means that it can no longer deliver the goal of one citizen, one identity, because it cannot survive so many comparisons without making false matches, so it would be false claims of multiple identities.

SPILLER: Professor Daugeman has given evidence to the Science and Technology Select Committee, and in the past he sat on the Government advisory body, the Biometrics Assurance Group. He's concerned that policymakers haven't grasped the mathematical dimensions involved in the ID scheme.

DAUGEMAN: I think people's eyes glaze over when they hear about those kinds of massive numbers, because they're just so far outside of ordinary experience, but I think perhaps decision makers, policy formulators and advisors haven't yet really sort of wrapped their brains around the numerical dimensions of what has to be delivered. If the slogan 'One citizen, one identity' is really what's intended, that has certain inevitable mathematical implications and requirements and I don't see how those can be delivered without iris.

SPILLER: Have you tackled the Home Office about this? Have you talked to them about your confusion about why iris isn't part of their plan?

DAUGEMAN: Well, not very energetically. First of all I am the inventor of iris recognition and what they would all say to themselves is, 'Well, he would say that, wouldn't he?' so I'm ….

SPILLER: Well, wouldn't you? Wouldn't you say that?

That's a reasonable accusation, I suppose.

DAUGEMAN: I am a totally objective academic. I think that this

issue about whether the required performance can be delivered needs to be discovered

through experience or through the analysis of people who are more disinterested than I am.

SPILLER: James Hall, Chief Executive of the Identity and

Passport Service, recognises that fingerprint technology might not be enough on its own

and they may have to bring in fingerprint experts where there are questionable matches.

HALL: We always recognised that there will be question

marks thrown up during the matching process that would need to get resolved by manual

intervention and the process cannot be 100% automated in all situations. And our costs

include provision for dealing with all of that.

SPILLER: For getting it wrong?

HALL: No, for … for questionable matches that come up

that need to be resolved manually.

SPILLER: But Professor Daugeman says he's tried to get the

Home Office and advisers to look at the figures but they simply haven't got to grips with

the numerical dimensions of what's going on here, in fact their eyes glaze over.

HALL: Well, we work very closely with a biometric

advisory group drawn from a number of experts from around the world who are giving us

very supportive advice around this.

SPILLER: This is a risky project isn't it?

HALL: I accept that there is always an element of risk in

large-scale technology-based change, or indeed large-scale change in large organisations –

whether it be in the Government sector or in the private sector. I think that you will also

accept that Information Technology is a necessary and pervasive part of any large scale

business or Government department. And I am confident that with the suppliers that we will select, we will put in place the capabilities to successfully deliver.

SPILLER: After their investigation into the ID card scheme last year, MPs on the Science and Technology Committee warned that the cost of the failure of this project would be enormous, both financially and politically in terms of public trust. For its part, the Government acknowledges its ambitions for the scheme are considerable. But it says these ambitions reflect the scale of the benefits that could be achieved.   The stakes in the Government's new identity revolution remain high.