

Immortal
by
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(Excerpt Prologue and Chapter 1)

'Immortal'

1st Edition

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PROLOGUE

London, Friday 4th August

When Imperial College's students had been ordered to vacate the main campus for the whole of Friday evening the rumour-mill had gone into overdrive, settling on the view that an extremely influential investor was being given a private tour.

Coming a close second was the supposition that the entire place was being fumigated for rats.

The students were wrong on both counts.

The chancellor of Imperial College was hosting a presentation, but precious few of the invitees knew any more than the temporarily disenfranchised students.

The attending academics, press reporters, and politicians had been told nothing more than to expect something era-defining.

As Tim Boston was patted down for recording devices at the third and final security gate, he smiled; he was one of the select few to know the truth.

Tim opened the door to the lecture theatre for his colleague, Samantha Turner, who wheeled herself through.

Normally dressed entirely for utility, Sam was looking rather glamorous this evening. Her blonde hair, usually stuffed under a beanie hat, was now an asymmetric bob with electric purple streaks.

'Cool haircut,' said Tim as he followed her in. 'I didn't see it in the taxi.'

'Thanks for noticing,' said Sam. 'I thought I'd try for once.'

Tim chuckled. Sam didn't need to try – as evidenced by the many eyes following her as she entered the auditorium. His smile slipped, though, as he noted the initially approving eyes now looking for a plaster cast or other acceptable reason for her to be in a wheelchair.

Superficial arseholes.

Tim put it out of his mind, knowing Sam was accepting of it. It was she who'd pointed out that particular behaviour to him in the first place.

Looking around the lecture theatre, Tim reflected that it hadn't physically changed much in the fifteen years since he'd left the place.

The atmosphere was very different today, however. Along with the sheer number of people packed in, the nervous anticipation was palpable.

'A full house,' said Sam, glancing around the room. 'They're probably not even here.'

'They may be.'

'You know what MacKenzie's like,' said Sam.

Tim shrugged. 'We're here ...'

Today was launch day for Francis MacKenzie's new MedOp service. As the core members of the MIDAS (Massive Integrated Data Analysis System) delivery team, Tim and Sam had been invited. From what Tim had managed to get out of Charlie Taylor, MacKenzie's right-hand man, there were at least nine other teams working – in strict silos – on other aspects of MedOp. Tim

would have liked to meet someone from the quant algorithm team but whether any of them had been invited was unclear.

Charlie had said many times in the run up that MedOp team attendance was strictly limited. He'd gone on to say, in great detail and with notable deference to MacKenzie, that Tim and Sam had been very lucky to be invited at all and that they were absolutely not allowed to network at the event.

Tim looked across the room. Charlie was talking with Max Greening, the chancellor of Imperial College.

He's networking ...

Sam leant over. 'The chancellor has won the lottery tonight.'

Tim nodded. It would be amazing publicity for Imperial College.

'I imagine Chancellor Greening has had full unrestricted briefings,' said Sam.

The tone of her voice made Tim turn.

Sam, her eyes wide and innocent, smiled sweetly.

'Charlie should have told you,' said Tim. 'But you know what MacKenzie's like.'

'Don't worry, I've practised my surprised smile,' said Sam, winking.

Tim smiled back.

Charlie had been in a relationship with Sam for almost six months – during which, he'd consistently refused to tell her anything about his own work with MacKenzie. It was not a high point in their relationship dynamic, and was possibly made worse by the fact that Tim had told Sam everything he knew. Which wasn't that much about wider MedOp activities, but it was more than nothing.

'Why would MacKenzie think we'd have leaked anything anyway?' asked Sam.

'It would have added to the general distrust of MacKenzie if we'd told anyone our role,' said Tim. The public was increasingly conscious of data privacy and how third parties used personal data. MIDAS was the most advanced data aggregation and analysis system ever developed; data privacy was the clear victim of its capability ... but within a few hours everyone would be begging Francis MacKenzie to harvest their data.

'But ... can people distrust him any more than they already do?' asked Sam with a raised eyebrow.

Movement towards them drew Tim's attention before he could answer. Charlie was walking over with a big smile on his face.

'Don't wind him up,' said Tim.

Charlie shook Tim's hand, then bent down and kissed Sam on the cheek. 'Almost time,' he said. 'Ready for the most momentous scientific proclamation of the century?'

'I'd enjoy it more if I knew more about it,' said Sam, point-scoring.

'You soon will,' said Charlie, the smile fixed on his face but now looking a little forced. 'I got you the best seats. Sorry, I'd better get back.'

As he departed, Sam turned to Tim. 'Front row ... and that's just one of the benefits of the crippling pain and lack of mobility,' she said, tapping the arm of her wheelchair.

Tim winced. Almost five years after the accident, he still couldn't handle Sam's flippancy about her condition even though he knew it was an important coping mechanism for her.

Again, Tim craned his neck and looked around. Did any of these people look like mathematics geniuses, capable of writing a ground-breaking data analysis algorithm?

Sam nudged Tim. 'Over there,' she whispered. 'Behind Chancellor Greening, I recognise her ...'

Tim looked. In the low lighting of the auditorium he could make out only the vaguest details of the woman's face but she did look a little familiar. 'Not sure.'

Moments later, Chancellor Greening took to the stage, to brief applause. As it subsided, he spoke. 'Government ministers, benefactors, academics, friends, and ladies and gentlemen of the press, welcome. Tonight, I'd like to introduce you to Francis MacKenzie, the father of entrepreneurial science advancement.'

The lights dimmed further, and Chancellor Greening stepped to the side.

An enormous screen which filled the middle of the stage slowly lit up. Gradually an image became clear. It was the head and shoulders of Francis MacKenzie: trademark thick black-rimmed glasses, a close-cut beard, and chin resting on the tips of his fingers, pressed together as if in prayer.

He slowly blinked and took a breath, seemingly preparing himself.

Then, looking straight into the camera, he spoke.

'Good evening. It is my pleasure to address you tonight,' said MacKenzie.

Tim looked across at Sam to see her produce a mock yawn with accompanying eye-rolling.

'Many of you will have heard of me for my work on SpaceOp,' said MacKenzie. 'Some of you with longer memories will recall my corporate raider days.'

Tim knew this. He'd performed a detailed background investigation of MacKenzie before he'd taken the role at MedOp. Francis MacKenzie was ruthless and not particularly well liked.

'Today, in these brief minutes, I shall be telling you about my new venture MedOp.'

MacKenzie paused. 'Looking back over human history, it is clear to see that for most of the time, life has been regarded as a very cheap commodity. The pharaohs, the robber barons, the various dictators, have all spent human capital without much thought. In the last fifty years, however – an eye-blink relative to human existence – social and medical advancements have made life valuable ... treasured ... precious.'

The screen faded out.

Total darkness and utter silence lasted for a few seconds.

When the screen lit again, it was filled with the image of a single fern-shaped leaf.

Tim looked closer. It wasn't a biological leaf, the shape had been created by a mathematical model.

'The fabled fractal leaf,' whispered Sam. It was the secret MedOp emblem.

The word 'MedOp' appeared superimposed over the leaf.

Just as a murmur started to build around the auditorium, a spotlight appeared at the side of the stage.

Francis MacKenzie stepped into it.

The murmuring stopped.

'I do not intend to make life cheap again. I intend to make it free.'

It was not clear whether MacKenzie expected applause or cheers, but the auditorium remained silent.

MacKenzie did not miss a beat. 'Nine years ago, I set up a corporation focused on life improvement via genetic engineering. The early work suffered from accusations of eugenics and sustaining the global elite.'

He paused for a moment to take off his glasses, clean them, and replace them. Then he walked to the front of the stage.

'But that was just politics, which frankly does not bother me at all.'

A polite chuckle filtered around the room.

'What did bother me, very much, was that it never really worked.' MacKenzie paused. 'Biological life is complex. I won't insult the mathematicians here by saying *infinitely complex*. But, as we hit unintended consequence after unintended consequence, I realised that solving the equations of life from first principles was beyond humanity's ability.

'For instance, my teams spent years trying to work out which genes controlled the development of arterial plaque, which enzymes and proteins were involved, and how they could be turned off. Every time a lead was found, months later, it would be shown that those same enzymes and proteins were also critical for eyesight, or balance, or liver function.

'So ... here and now, I am formally surrendering to theory. I won't fight it. From now on ... it's all about practical application.' MacKenzie scanned the crowd. 'So where am I going?'

The image on the screen changed from the fractal leaf to a spider-shaped robot.

'Health. Affordable and available.' MacKenzie looked up at the screen. 'This robot is my firstborn. Invisible to the human eye, it operates for up to four hours without recharging.' He paused. 'But what does it do?'

After waiting a few seconds, he continued. 'Injected directly into the blood stream, with special human antigens on its surface to ensure it is not rejected by the immune system ... it eats arterial plaque.'

He pointed at a simple graphic that had just appeared on the screen. 'It doesn't care how the plaque is formed.' MacKenzie paused. 'Or why the plaque is formed.' He paused again. 'It simply demolishes it.'

Low background conversations sprung up around the auditorium.

MacKenzie talked over them. 'Within three years, MedOp will provide free arterial cleaning to whoever wants it.'

Tim had gone into the presentation knowing that MedOp would be providing the arterial cleaning, having been told himself six months previously. He had also known that MacKenzie intended to provide it as a free service for everyone. Paying for the service was a key aspect of the MIDAS application.

Chancellor Greening walked back onto the stage. 'Thank you very much, Francis. I believe you are prepared to take a few questions?'

Smiling in assent, MacKenzie turned to the audience. ‘Questions. Please state your name and then your question.’

The house lights came up and a couple of the administrative staff handed out microphones to questioners.

‘Professor Steven Johnson, Biomedical Engineering, UCL. Have you started human trials? And if so, where?’

Talk about a pointed question. Human trials with tiny spider robots injected into someone’s bloodstream. Tim could feel MacKenzie’s lawyers all holding their breath. If they’d run those tests without enormous levels of approval from government agencies, then MacKenzie would be complicit in a myriad of crimes.

Silence.

The image on the screen changed back to the fractal leaf.

‘We have not yet *completed* human trials.’

A ripple passed around the crowd.

MacKenzie was being deliberately antagonistic. The word completed could be interpreted in many ways.

Sam laughed quietly. ‘Showman.’

‘Show *off*, more like,’ replied Tim.

MacKenzie turned back to the screen. ‘But to wind in my own innate desire for shock and awe, I will clarify. No, we have not yet started human trials. Next question?’

‘Mary Cleaves, Harefield Hospital,’ said a voice towards the back. ‘How does the immunosuppression work?’

‘I will not be sharing the underlying science,’ replied MacKenzie with a slight shake of his head. ‘But at the end of the evening, a data sheet will be distributed with facts about rejection rates and suchlike. I am sure you will understand, some information will be kept confidential.’

Chancellor Greening stepped forward and raised his own microphone. ‘If I may. How will people apply for the treatment?’

MacKenzie addressed his answer to the audience. ‘Taking the arterial cleaning will be one hundred percent elective. From tomorrow, any UK resident will be able to apply to join a waiting list. Once all tests and approvals are completed, we will start working through that list.’

‘Simple as that, Francis?’ asked the chancellor.

Again, MacKenzie shook his head. ‘Not quite. People who sign up will commit to participating in a series of anonymous surveys across any subject matter chosen by MedOp. They will also provide detailed personal data along with a DNA swab.’

‘But they will not have to pay anything?’

‘Nothing.’ MacKenzie paused. ‘Just fill out the surveys anonymously and accurately.’

Historically, the weakness of online survey tools had always been convincing people to fill them in; response percentages were usually in the low single digits. MedOp applicants would have a very compelling incentive.

MIDAS would create, disseminate, and analyse the responses to those surveys, correlating them where required with the participants’ DNA readings and all manner of other personal data.

Sam leant in close and whispered, 'I'm going to ask him about certifying the data privacy.'

As Sam raised her hand, Tim grabbed it and pushed it down. 'Please, not now.'

Sam looked for a moment as if she would overrule Tim, but she relented. 'Later.'

Back on the stage, MacKenzie continued to speak. 'I can assure everyone that all data received will be treated confidentially, and all applications will be treated fairly.'

'What political fallout are you preparing for?' asked the chancellor.

'The next three years are not going to be easy. I am in close discussions with the prime minister to ensure that although the service remains a private enterprise, MedOp enjoys the full backing of the British government, which will be examining the implications for international relations, tax, the retirement age... the list goes on.'

'Are you signing up for it yourself?' someone shouted from the back corner of the auditorium.

'I expect to need it, to remain healthy to fight all the upcoming battles.'

MacKenzie turned away from the audience towards the chancellor, but the heckler had a follow-up.

'Will you make immortality available to everyone once you crack it?'

From his own research of MacKenzie, Tim understood the basis of the question. MacKenzie had given generously to cryogenic research and stem cell research long before he'd started MedOp.

MacKenzie ignored the question. 'Free arterial cleaning for everyone within three years.'

After briefly shaking the chancellor's hand, he walked off the stage.

After waiting ten minutes for the auditorium to clear, Tim and Sam headed for the post-talk drinks reception.

Again, Tim scanned the room. He hadn't given up all hope of meeting the mathematician who was responsible for the underlying data analysis algorithm. It was only two percent of the overall MIDAS code – Tim and Sam had written almost all the rest – but that algorithm was one of the most devilishly clever bits.

In fact, Charlie had helped with some of the coding logic too. Charlie's own background in behavioural modelling had supported their work on dynamic meme linking.

Speak of the devil ...

Charlie had broken away from talking to the familiar-looking woman they'd seen earlier in the lecture theatre and walked over to join them.

'Are there other team leaders here?' Tim asked Charlie as he arrived.

'Nope,' said Charlie, reaching down and taking Sam's hand. 'You two are special cases.'

'You said there was a chance I'd meet a few,' said Tim, aware that he was sounding a little needy.

Sam came to his defence. 'Come on, Charlie.'

'I never promised that,' said Charlie, his eyes darting to the corner of the room where MacKenzie was speaking to Chancellor Greening. 'You know what Francis is like.'

'Who was the lady you were speaking to before?' asked Sam. 'I saw her in the lecture theatre behind Chancellor Greening.'

For a moment it looked like Charlie wouldn't answer, but then he relented. 'Xandra Kusr.'

Ab...

Tim knew her name. Dr Xandra Kusr was a neurosurgeon – a *struck-off* neurosurgeon.

'She's formally working with MedOp?' asked Tim.

'Almost,' said Charlie. 'I know that you know her background. It's complicated.'

'Can I talk to her?' asked Sam.

'No,' said Tim, aware the question had been for Charlie. 'We mustn't risk annoying MacKenzie. You know his views on compartmentalisation.'

Tim really didn't want to annoy MacKenzie. Their ability to earn significant money developing MIDAS was entirely reliant on the final discretionary bonus that MacKenzie would decide independently. MacKenzie was not known to be generous at all, but even less so with people he felt had crossed him in any way. The previous year, Tim had found an editorial in a business journal detailing a company MacKenzie had bought. The factory workers were rumoured to have been 'off' with him on his first site visit. So, MacKenzie had shelved his turn-around plans, stripped the assets, sacked the workers, and sold off the real estate – all within three days. The editorial stated that MacKenzie had been entirely upfront about his change of heart, simply stating that the original rescue plans had assumed a certain level of employee buy-in and motivation. When it became clear to MacKenzie that part of the equation did not exist, he'd implemented Plan B.

'I want to know what Kusr has been up to,' said Sam.

Charlie shook his head. 'Sorry.'

Sam's face registered disappointment. For a moment it looked as if she would wheel herself over to the woman in question, but then a voice interrupted the conversation.

'Mr Boston. Miss Turner.' The voice of Francis MacKenzie.

Tim turned.

'Is MIDAS ready to send surveys to applicants?' asked MacKenzie.

Tim took a breath before answering. MacKenzie knew it was. They'd been testing it hard for the last two months. 'We're ready,' he said.

'It's critical,' said MacKenzie. 'I need to track public opinion and keep ahead of any growing concerns. The information I get from that survey data is gold dust.'

MacKenzie was correct about the data being valuable. As well as using it for early identification, and validation, of negative public perception – which could then be countered with focused interventions – MedOp also needed the financial security it would bring. Participants very explicitly agreed, in their contracts, for the data to be sold to third parties.

'It's ready,' Tim repeated. He always felt uncomfortable when the commercial element came up. MacKenzie always stated that data tranches would be anonymised and individuals' privacy protected, but Tim knew that Sam seriously doubted the anonymisation would be enough. The

available tools providing smart data triangulation were simply too strong. Sam should know; she'd designed the module used in MIDAS for just that purpose.

Tim looked at Sam, willing her not to bring the subject up.

She seemed to be considering it, but luckily Charlie – perhaps sensing the moment too – intervened.

'We think that at least five million people will sign up,' said Charlie. 'And they will commit to answering surveys every week to keep their allotted spaces.'

'Blackmail,' said Sam lightly.

MacKenzie smiled, appearing to take the comment in the intended manner. 'I think, Samantha, they're getting the better end of the deal. They tell me which butter they prefer, and I cure their heart disease.' He paused. 'Anyway, don't book yourself on any holidays. It's going to be non-stop.'

'We're on top of the next set of enhancements,' said Tim.

'Improved anonymisation ...' said Sam quietly.

MacKenzie affected not to have heard Sam, but the tone of his voice indicated his mood had soured. 'I hope so. Your bonus depends on it.'

With a disapproving glance at Tim, MacKenzie walked away with Charlie hurrying after him.

'Not great,' said Tim.

'Sorry,' said Sam quietly.

They both watched as Charlie was waved away.

'I wasn't the only one who annoyed him this evening,' said Sam. 'There was the guy with the immortality question.'

'You can see how MedOp looks at first sight. There's some big ethical questions,' said Tim. 'Who wouldn't want to live forever?'

'Me,' said Sam with a tiny gesture at her wheelchair. 'Not like this, anyway.'

Tim took a sip of his drink and scanned the crowd.

The silence stretched.

'Sorry,' said Sam. 'You know I don't mean ...'

Charlie slunk back. 'Dinner for three?'

Tim considered the invitation very briefly. 'Not for me, thanks. I'll soak up the atmosphere here for a bit.'

'Maybe find an algorithm writer?' asked Sam.

'Please don't,' said Charlie, with an admonishing look.

Sam gave Tim a final smile, before turning and wheeling away with Charlie. 'See you Monday,' she called over her shoulder.

'See you Monday,' said Tim quietly, to her retreating back.

Alone now, Tim watched the crowd ebb and flow whilst he finished his drink.

It should have been him taking Sam for dinner, but somewhere along the way, he'd missed his chance.

CHAPTER 1

MIDAS Butler Street Offices, East London, Monday 8th April

Climbing the stairs to the company offices in Butler Street, Tim entered the password into the door and then swiped his smart card. The light flashed green.

Inside the main office area, he typed the daily encryption key-code into his phone and the room registered his presence by adding his name to a smart screen on the wall.

Sam was already at her desk. This was not unusual; a combination of poor sleep patterns, desire to leave at a sensible time, and the fact she preferred not to be watched during her arrival routine meant that she was normally in the office first.

Sam's hair appeared to have been heavily re-bleached over the weekend, and the tiny blue tattoo of the Greek letter psi stood out even more prominently on her neck. Her desk, ostensibly subject to the same overnight cleanliness policy as Tim's, was already piled high with junk: two soft drinks cans, a bowl of muesli, a raincoat, and a Virtual Reality headset.

'Does the extra colour mean you won?' asked Tim.

'Yep,' said Sam, gingerly leaning back in her chair. 'The Triple-Bs fragged their way to another trophy.' She made a gun from her pointed finger and blew imaginary smoke off the top of it.

'Has Charlie said anything about the exact dates of the next code delivery?'

'He was working on special projects for *Francis* all weekend.' Sam rolled her eyes. 'I didn't see him.'

'Fair enough,' said Tim, aware that Sam and Charlie were going through some relationship tension.

Just don't dump him before we get paid.

The thought jumped unbidden from some dark place within Tim's psyche. Luckily, his filter stopped him verbalising it. Charlie had been instrumental in them getting the contract for MIDAS, and his ongoing goodwill was critical.

'OrcLore?' asked Tim, nodding at the Virtual Reality headset on Sam's desk. OrcLore was an online role-playing game that had first interested Sam purely as a pastime but had recently become enmeshed in her work, as a potential source of data. It had tens of thousands of subscribers all running around a make-believe world interacting with each other, mostly fighting but sometimes having conversations.

'Yep. I finished the scripts last night. I'll give you an update later.'

'Great,' said Tim, moving over to his desk. He booted up his computer and checked the overnight runs. 'I look forward to seeing if your gamebots can extract information from other players whilst they're hunting wolf pelts.'

Sam sniffed in response, and then narrowed her eyes. 'You'll see.'

Tim turned back to his own screen and checked the status.

Odd...

One of the security logs was showing a data anomaly.

‘Have you picked up the overnight server room prints?’ Tim asked Sam.

‘Sorry, no.’ Sam dug around on her desk for a few moments, and then passed over a few A4 printouts. ‘These are the office ones.’

Given that MIDAS was constantly connecting into millions of external data sources, MacKenzie had been obsessive about having intricate checks to protect against hacking. They used highly specialised passive sniffing modules clamped around the various ethernet cables within the main office and server room. The modules measured the tiny changes in electromagnetic radiation when signals passed to MIDAS from the office workstations. Separate programs monitored the various processes on every computer. By triangulation, and big data analysis, a security protocol raised alerts if there was a chance that data had been stolen, moved, or created without appropriate permissions.

The security log anomaly implied something had happened.

Tim looked up at the smart screens and then across to Sam. ‘Have you noticed any data leakage?’

Sam shook her head. ‘My stuff is all secure. Why?’

‘One of my logs is showing a blip,’ said Tim. ‘I’d better report it.’

‘Let’s track it down first. Send me the log file.’

Wise words ...

MacKenzie’s obsession with secrecy meant that Tim and his development team had no access to the MIDAS production systems installed in Anglesey. Just because their development system was showing a blip didn’t automatically mean that MacKenzie’s MIDAS production had been impacted.

But if there was a risk...

Quickly, Tim dropped an email to MacKenzie stating a possible hack had been registered and they were investigating.

The response came back in five seconds.

Full report by tomorrow lunchtime.

Toby – the third and final member of the MIDAS development team – arrived. Walking over to the wall where a sheet of paper was stuck on the corner of a smart screen, he scrawled ‘40 million’ on the sheet. ‘I changed my mind over the weekend. Immortality over freedom. Everyone of the right age who can read, write, and has internet access.’

It was their ongoing team bet as to who could guess the eventual number of UK MedOp applications by the time initial registration was frozen at the end of the year.

‘So, you don’t think anyone is put off by the data suck requirements?’ asked Sam.

‘Personal medical data, like the DNA swab, is a bit sensitive,’ said Toby. ‘But the surveys are just market research.’

‘We don’t actually know what is asked day-to-day,’ said Sam, raising her eyebrows. ‘Do we?’

Tim suppressed a groan. Sam was needling Toby. MacKenzie had forbidden anyone professionally involved in MedOp from applying for registration. Their families were forbidden

also, but Sam was positive that Toby's father, having applied with a fake name and address, was getting surveys. In fact, Sam had always said she wouldn't apply as she didn't want MacKenzie accessing all her personal data.

As if he couldn't have snabbed the desks in here for her DNA a hundred times if he wanted it ...

'Let's not go there again,' said Tim.

'Do you really not think it's worth it?' asked Toby, looking at Sam as he set his coffee down on the desk. 'This is an amazing step towards proper technology augmentation for humans. Surely it's reasonable if MacKenzie needs to pay for the research using marketing data?'

Sam looked uncertain for a moment, but then her eyes narrowed and face hardened. 'I get the maths, yes. Give me your data and I will give you good health.'

'So, you just don't want MedOp to tell the corporations what your favourite pizza topping is?' asked Toby.

'It's not that,' said Sam. 'I don't have a problem with selling the data as long as it's not attributable back to a single individual.'

'Agreed,' said Tim. A few months previously, MacKenzie had sold the first tranche of MIDAS data to a large pharmaceutical firm. Tim and Sam had triangulated searches around the company and its employees to see what they could discern about the contents of the data. It had all appeared clean. MacKenzie seemed to have adhered to his data privacy commitments.

'When can you get the real number?' asked Toby.

MedOp registration included severe preconditions that applicants were not allowed in any circumstances to discuss or broadcast anything related to MedOp. It was impossible to get the real number of applicants from public sources, but newspapers – with God knew what sources – had estimated that in the eighteen months since the Imperial College launch, five million people had signed up.

Tim, due in Anglesey later in the month, would have access to the production systems and had undertaken to try to get the real number. Of course, he would not attempt it if there was even a tiny chance of being caught, but he had some ideas. 'I'm not promising anything.'

'I accept that fear of a heart attack is a strong driver,' said Sam, 'but I'll stick with six million.'

'Why so low?' asked Tim, whose own guess was nine million. 'Is it really data privacy? Or do you think people are just waiting to see if the first candidates get eaten alive from the inside?'

Sam smiled warmly at Tim, causing a small buzz of satisfaction to flow through him.

The feeling ended abruptly as an alarm sounded and five of the smart screens on the office wall flashed.

Each of them displaying an identical message.

***We are the Ankor
We are 'Aliens'
You must obey us in full to survive
There will be no dialogue
We will send critical directives
A Gamma Ray Burst will arrive in 164 Earth days
Three concurrent defences are necessary***

***Deflector shield
Survival units
Community bunkers
Individual instructions will follow***

‘What’s that?’ said Sam.

‘Some type of practical joke?’ said Toby. ‘An Eastern European hack?’

‘Maybe a viral advert for a new online game,’ said Tim, wondering if the earlier data anomaly was related.

‘It’s on my phone too,’ said Sam, holding up her mobile.

‘And mine,’ said Toby.

Tim looked at his own. He had it too.

‘Aliens,’ said Toby. ‘My mother is going to freak out.’

‘She freaked out when they changed the shape of the one-pound coin,’ said Sam. ‘Didn’t she go to bed for three days?’

‘Yep,’ said Toby, already dialling.

Sam dialled hers, too.

Tim considered calling his own father but decided to simply send a text checking everything was okay. He stood and looked out of one of the main windows onto the street below. Two floors up, and shielded by reinforced secure windows, Tim couldn’t hear any sound from the street. As he looked closer, however, he could see groups of men and women clumping together and staring at mobile phone screens.

A few cars pulled over onto the pavement; people got out and congregated.

Back in the room, Toby was whispering urgently into his phone, whilst Sam had obviously completed her call and was now launching a series of searches within MIDAS and feeding them to the main smart screens.

Tim closed the window blinds and returned to his desk.

The central smart screen showed MIDAS in action: newsfeeds, social media feeds, and real-time automated surveys flooded the screen with text and information. The far right-hand screen simply showed a summary, whilst other screens displayed maps, video streams, and other information.

After twenty minutes of information bedlam, some relevant items appeared on the smart screen. This was data that MIDAS had determined to have the most validity, consequence, and relevance.

Multiple governmental agencies across the globe have validated that the messages are coming from somewhere just outside the current orbit of Neptune. An elaborate hoax has not been ruled out but there are very few Earth craft out there

**Gamma Ray Burst arrival 164 days. Source unknown. Damage unknown.
Large Gamma Ray Burst associated with previous Earth extinction event**

On a new screen, Sam typed in 'alien invasion'.
Within moments, MIDAS came back with:

Alien Invasion largely rejected by data feeds.
Trending words: pointless, unlikely, conspiracy

There were also links to the most read and most recently published articles about alien invasion. Tim created a duplicate of the search results on his own desktop and started reading.

'I'd quite like to get a sense of the atmosphere out there,' said Sam, reaching for her emergency crutches. 'Coffee?'

'Are you sure?' asked Tim. 'We'll be able to monitor more from in here.'

'But we'll *feel* more out there.'

'Okay,' said Tim.

Knowing from experience that Sam could only function on crutches for twenty minutes before serious discomfort set in, Tim stood and retrieved her wheelchair.

Spinal injuries were bastards to manage, with crippling pain being the constantly lurking enemy. Once the final bonus payment from MacKenzie came through, Tim hoped he could convince Sam to try ground-breaking neural pathway regrowth treatment.

'I'll stay in and monitor the news,' said Toby.

Five minutes later, they were out on the pavement, Sam wheeling herself, as usual. Her chair did have detachable handles stored under the seat – *for emergency purposes only*. She was very clear on that. Tim had had his thigh punched on more than one occasion for trying to give unsolicited assistance.

Up and down the road, the pavements were filling up with other people who had decided to go outside too: mothers with babies, old people, and youths who should have been at school all gathered on the pavement.

The nervous energy was palpable.

Suddenly, being outside didn't seem like quite such a good idea. 'Maybe we should go back?'

'We're not going to suddenly be attacked by our neighbours,' said Sam, pointing towards a large group of middle-aged men and women congregating outside an electronics store a few doors down. 'Let's see what's going on over there.'

As they got closer, the crowd resolved into a collection of worried individuals. Newsfeeds showing on televisions in a shop window showed various governmental agencies asking for calm. All the programmes had a ticker along the bottom of the picture saying the prime minister would address the nation at two o'clock.

Tim reached for his phone to check the latest on the internet.

Unable to connect

'It's the start of an invasion,' someone said.

'Judgement Day,' said another woman.

Each phrase triggered part of Tim's brain to run a little simulation and determine both the likelihood, and the severity of the consequences.

Not good!

'You okay?' asked Sam, obviously seeing his face registering fear.

'Yeah, let's get that coffee,' said Tim, burying his fear.

Two minutes later, they entered their favourite coffee shop Bean Ground Down?

The proprietor was switching off the lights. 'Sorry. All my staff wanted to get home and check in with their families.'

'No problem,' said Tim, suddenly wondering whether he should have done the same. He turned to Sam. 'Do you want to go home?'

'I'm fine,' said Sam.

Tim called Toby and gave the same message. His sense was that Toby had left the building before Tim had hung up.

'I'd better check that Toby locked up properly,' said Tim.

'I've got to come back to collect my stuff.'

They returned to the office where they found Toby had locked up, and set all the alarms, correctly.

Tim opened his workstation while Sam gathered her belongings.

'Do you want me to come with you?' asked Tim, when it was clear Sam was ready to go.

'Nah,' said Sam. 'I'll be fine.'

'You sure?'

'I'm sure,' said Sam, wheeling herself out.

Tim turned his attention to MIDAS. The primary information had not changed. As far as he could see, the Ankor had sent just the one message, although rumours were emerging that certain world leaders had also received personal messages.

Tim just surfed. The benefit of staying in the office was that MacKenzie had paid for their development site to have incredibly fast internet access.

Several government agencies were reportedly sending a radar pulse back along the trajectory of the incoming message to confirm if something was there. They'd all been at pains to say that the Ankor would not interpret it as an attack – the power of the pulse was carefully set to be only just sufficient to make the eight-hour round trip.

Let's hope the Ankor feel the same way

At two o'clock, the prime minister, Joshua Timbers, addressed the nation. He looked older than Tim remembered.

This is an unprecedented event in the history of humanity. We are working tirelessly across all government agencies to validate the message. Please continue with your lives as usual. My next update will be in six hours, or sooner if new pertinent information presents itself.

For a statement that said nothing much at all, it hadn't been a bad one. Reassurance had been given, and a clear timetable for the next update as well.

Tim headed home and continued to browse.

Already the internet was awash with disaster theories – the most pertinent being that historical precedent set a grim picture for junior species, or societies, when the big boys came calling. Even if the senior species was altruistic, which was not always the case, it rarely ended well for the little guy.

The prime minister's evening update added more detail. The various governmental agencies across the globe were sharing information concerning the radio pulses they'd sent towards the Ankor. Unfortunately, atmospheric interference and signal scattering meant that no meaningful information could be gleaned about the size or nature of the alien craft. However, a craft did exist, it was currently somewhere near Neptune, and it was approaching Earth under its own power at a speed unattainable by any human technology.

The Ankor were less than three weeks away.