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Future Focus: Communications

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The word 'recession' is on everyone's lips, yet already there are quiet murmurs of recovery. Exactly when the economy will grow again is unclear. But recovery is certain.

Equally certain is the fact that some companies will emerge very strongly from the current economic problems. Part of their success will be down to reorganisation and improved efficiency. But most of this rapid success will be due to strategic decisions taken now.

Future Focus is a multi-media programme organised by the Telegraph Business Club to help senior personnel within medium-sized UK businesses to make inspired strategic decisions that will drive business success during economic recovery.

The highlight of the Future Focus programme is a series of full day business conferences around the UK and Ireland taking place to:

- **INFORM** - Give an expert insight into future products and technologies that are just about to have a major influence on our life and work.
- **INTERACT** - Allowing you to meet and talk with fellow business professionals and expert speakers.
- **INSPIRE** - Provide the opportunity to discuss and explore how they can be used to drive business success in the coming months and years.

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INTRODUCTION

Where would you go to see the future of business communications? A manufacturer's showroom? A university lab? A glitzy trade show? You may be better off visiting the average teenager's bedroom.

This is not because that teenager could shortly be arriving in the world of work expecting access to the same power and variety of communications media they use at home (although they probably will). It's because, hidden behind the funky names and consumer-friendly packaging, Facebook, Twitter, Flickr, YouTube and Second Life are technologies that really work, and that have the potential to provide real benefits in productivity, creativity and customer service to businesses brave enough to adopt them.

The new world is likely to be about interpersonal networking, online communities, and multi-channel communications that dynamically combine sound, vision and data in whatever way best suits the conversation. These could enable your staff to find the right people and share thoughts and information with them - in other words, to collaborate.

Clive Harris, chief innovation officer at IBM UK and Ireland, has studied companies that are consistently praised for their innovation - IBM, Microsoft, Google etc - to find out what makes them innovative. "The answer," he says, "is that they're collaborative, they're good at working with others inside, and especially outside, their organisation."

Social networking sites such as Facebook, MySpace or Bebo are becoming a legitimate marketing medium, and private areas can be an ideal way of keeping in touch with remote workers, trading associates and clients, says Daphna Steinmetz, chief information officer at value-added services specialist Comverse Innovation Labs.

Business-strength alternatives, allowing tight security and control by the company's IT specialists, are starting to attract the attention of business executives. "We're seeing huge interest in our social networking solution, IBM Lotus Connections," says Darren Adams, messaging and collaboration leader at IBM. "Innovation isn't just something that happens in the development lab but throughout the organisation, so you need a company-wide platform for joint working and sharing ideas."

“Chat [aka instant messaging] is becoming the fast lane of text-based communication and email is the slow lane,” says Ian Robin, head of sales and marketing at internet communications pioneer Skype. “Our business users do more chatting than voice or video calling, and I’ve got several chat windows open now with individuals or groups.”

Instant messaging is ideal for asking a quick question, whether it’s to check a fact, follow up after a phone call, confirm that a document you just sent has been received safely, or see whether the person fancies a lunchtime pint.

It’s said that an experienced call centre agent can potentially maintain four, or even six, separate chat conversations simultaneously - even, if necessary, in a language they don’t speak, thanks to simultaneous translation tools.

“The whole structure of communication is changing,” says Kineon Walker from remote access and collaboration software specialist Citrix Online. “While the more traditional folks are talking, the next generation are much more likely to type a response, especially if they don’t know you well.”

Communication is becoming multi-faceted, says Robin, with the ability to shift seamlessly from chat to voice or video conference and back again during a single call, including the option to transfer documents and share access to what’s on the other person’s computer screen. Mobile devices will increasingly be brought into this loop, until communications become truly unified and independent of location.

Even something as simple as Twitter, where users post short announcements or ‘tweets’ saying where they are and what they’re doing, has an exact parallel in business communications. This is ‘presence’, designed to simulate the act of glancing across the room to see whether a colleague is in or out, busy or available.

Today presence relies on the computer network for its information - are we logged on, chatting, using a software application, on the phone etc? In future, says Jirina Yates, EMEA head of marketing at communications vendor Avaya, presence could become much richer, combining information

from mobile phones, GPS location, 'smart badges', cordless phones etc to determine our exact location and status.

Increased sophistication could give users more control over what is revealed and to whom, says Robin, so you could be incommunicado to colleagues but interruptible by an important client. It may also save would-be callers from wasting their time. "In future you should never need to leave a voicemail, because you'll never phone someone who isn't available," says Robin.

Real-time technologies like presence could contribute to 'communications-enabled business processes', says Yates, ensuring that communications are not a point of failure. For example, if one of your machines breaks down you potentially won't lose half an hour's production looking for the engineer.

Once you know where people are and what they're doing, you (or the system) can potentially select the most appropriate way to contact them. Link this to their calendar and you could see the windows when you'll be able to grab their attention. If they're busy you could 'tag' them to contact you when they've finished, or ask to be notified when they become available.

When they reply they could also choose the most appropriate medium, regardless of how you contacted them - answering your email with a phone call, for example, without having to look up your phone number or wait while they dial it. As systems become more intelligent, they could be able to ensure you receive communications in the most convenient way, regardless of how they started out - maybe automatically diverting your landline to your mobile, or using text-to-speech so you can listen to emails in the car. It won't be long before you could transfer a voice call or even a video conference from your fixed phone to your mobile as you leave the office without having to break off and start again.

All this goes under the umbrella heading of unified communications, with an ever increasing number of technologies - fixed, mobile and internet phone, email and instant messaging, tele- and video conferencing, blogging and tweeting - all potentially funnelled into a single pipe. It sounds as though you'll have so many addresses and numbers that you'll

need a business card the size of a dinner menu, but don't worry. The system will have the potential to take care of the detail, and people will only have to remember one thing: you yourself. "I am me, I'm Ian Robin, I don't want to be a number," says Robin.

If unified communications are simple, virtual worlds such as Second Life are anything but - a whole parallel universe where active users spend an average 16 hours a week and canny entrepreneurs have allegedly made millions selling everything from virtual fashion items to virtual real estate. Participants use 'avatars', animated representations of themselves, and although the technology is highly immersive it doesn't require high bandwidth or special equipment, just a web browser.

Real-world businesses are starting to use private virtual worlds for activities such as meetings, training, sales, marketing and customer support, says Tom Hale, chief product officer at Linden Lab, the company behind Second Life. IBM holds executive meetings in Second Life, while communications company Cisco uses it for sales training sessions that span time zones and continents, potentially saving on travel costs and fuel emissions.

"For large-scale simulations, virtual worlds offer opportunities for organisations to interact, in real time, in situations that would be prohibitively costly to create in real life," said Hale in an article for Echo E-Business. "A municipality, for example, could simulate and stress-test emergency responses to a major crisis."

In a connected world, who we know - and who our contacts know - will become as important as what we know. Steinmetz's team is developing technology to create 'social graphs': monitoring the amount and quality of communications between an organisation's staff. How often do people communicate, with whom, for how long, is it bi-directional or one-way, how quickly do they respond, whose blog postings are most highly rated? It should help identify the organisation's opinion-setters and communication champions, and who's best placed to pass on the latest management edict or pearl of wisdom through 'viral marketing' - rather like telling the tea lady of yesteryear.

Indeed, if there are any tea ladies left, they would almost certainly be on the network. In tomorrow's connected world, nobody need ever be out of the loop.

POWER TO THE PEOPLE

The internet has revolutionised commerce, but until recently it left the relationship between businesses and consumers largely unaltered. True, consumers could compare prices more easily and buy from suppliers all over the world, but suppliers still dealt with customers largely on their own terms. Now this is changing. The runaway success of 'Web 2.0' technologies such as social networking, blogging, tweeting and video sharing is potentially transferring the balance of power to the consumer, and analyst firm Gartner predicts that more than 60% of Fortune 1000 companies will have some sort of online community by 2010

"It's no longer about bringing people to your website," says Kishore Swaminathan, chief scientist at consultancy firm Accenture. "It's about going to where your target audience are hanging out, and having your views propounded, not by you as an organisation, but by the community as a whole."

The ability to monitor what's being said about your company in social forums such as Twitter, and then join in the conversation to present your company's point of view, is already being added to business-strength customer relationship management tools such as Salesforce. "If someone complains about your product you can contact them straightaway," says Woodson Martin, EMEA marketing vice president at Salesforce.com. "Not only does that person get a response from you, but all their friends see it too."

There are already agencies whose staff infiltrate themselves into online communities and try to shape consumer sentiment in favour of their clients, says Swaminathan. It's not so much blatant puffing of a company or its products, as simply starting or steering a conversation to create some positive vibes, or engage in damage limitation when things go awry.

Innovative ideas will increasingly come from outside as well as inside the company, Martin believes. He cites coffee house chain Starbucks, whose

customer feedback site received a suggestion to make its stirrers the right size to plug the hole in the cup lid to prevent spillage. Thousands of people voted for the idea, so Starbucks did it.

It's all part of a trend towards giving customers more choice in the way they communicate - not just telephone and letter, but email, text messaging, video phone, text chat, even talking to an animated avatar instead of reading an FAQs (frequently asked questions) page. Customers may also be able to switch media in mid-conversation, eg from text chat to voice phone for an explanation of something complex, or allowing the company's representative to take control of their PC to show them something on a website.

"Businesses will have to realise that 'one size fits no one' and relevance is key," says Daphna Steinmetz, chief innovation officer at value-added services specialist Comverse Innovation Labs. She believes communications will become 'semantic', based on the customer's individual preferences, their history of interaction with the company, and dynamic information on where they are and what they're doing right now (so you don't phone them if they're in New York and it's 5am, for example).

The nature of the customer's enquiry, and their potential value to the company, will also be taken into account, believes Ian Jones, head of strategic solutions at customer service software vendor eGain. The system could use 'case based reasoning' - the kind of questioning doctors use to narrow down a diagnosis - to decide the best and most cost-effective communications medium for dealing with the customer. A low-value customer wanting some product information would be steered towards a web page or automated avatar, while a customer whose contract was coming up for renewal and who had a complex query could be put straight through to a trained call centre agent.

LOCATION, LOCATION, LOCATION

The hi-tech devices that most of us carry around are increasingly capable of revealing our whereabouts, and location-awareness will become an important factor in determining our relationships with friends, colleagues and customers, says Clive Harris, chief innovation officer at IBM UK and Ireland. Pinpointing someone's location lets you define their personal

'presence zone' - not just plotting their geographical location but understanding the context, so you know whether they're at home, at a client's, on a train, at the theatre etc.

It can be as simple as knowing which of your friends is in the neighbourhood to go for a drink; or rendezvousing with a group of colleagues before a meeting; or knowing which service engineer is best placed to answer an emergency call-out. With knowledge of someone's presence zone a communications system could work out the best way to reach them, eg routing phone calls to their mobile if they're at the supermarket but to voicemail if they're in the cinema.

Communications with customers could become much more personalised and relevant by combining what you already know of their interests and purchasing habits with real-time information on their whereabouts, says Pieter de Klein from T-Mobile UK. You could send them an electronic coupon as they walked past one of your shops, or direct them to their favourite kind of restaurant when they arrived in a strange town. If they chose, you could establish a direct WiFi connection with their portable computer to send them information.

In future, says Mark Selby, vice president for industry collaborations at Nokia, we'll be able to point our phones or handheld computers at a building and be presented with a screen of relevant information, rather like a dynamic Yellow Pages - today's menu if it's a restaurant, which flats are available to rent if it's an apartment block.

By aggregating the presence zones of many users it will be possible to work out, for example, how much traffic is using a road or when to expect a rush of customers in a store, says Selby. An ice cream vendor, say, could spot holidaymakers heading for a particular beach and dispatch a van to be there when they arrive. It will revolutionise the way we think of maps, says Selby. "Until now a map has been a static object, but now you'll be able to see the flows of what's happening."

How accurately someone can be pinpointed depends on the technology they carry and how they choose to disclose the information it generates. Any mobile phone can reveal which cell it's in, which may be accurate to within 100 metres in a city centre, and can be made more accurate by

'triangulating' the position with reference to neighbouring cells. Satellite positioning (GPS), now available in more than a third of new mobile phones and all satnav systems, is accurate to within a few metres.

Within buildings Bluetooth and WiFi can let you know who's about, while the emerging technology of near field communications (NFC) will enable people to reveal their position to within centimetres if they choose, for example by touching their phone onto a poster or information point.

The major caveat, say the experts, is the issue of privacy. It's vital that customers have consented to having their whereabouts revealed and agreed the specific purposes for which this information can be used. And a company's employees won't want to feel that Big Brother is constantly watching them.

THE ABC OF REMOTE COLLABORATION

Advances in communications technology mean that companies and supply chains are becoming more geographically dispersed, as individuals pick the most convenient location to work and companies choose the optimum trading partners. Yet as businesses face relentless pressure to innovate and improve, the need to work co-operatively has never been greater.

"People will still work in teams, but those teams won't always be physically together or even from the same company or in the same country," says Dave Conway-Jones, a senior inventor in IBM's emerging technology services group. "Some will be dynamic, coming together for a single project and then moving on."

So the technology that is driving us apart will also have to bring us together, enabling teams to collaborate over extremes of distance and time. Software is emerging, such as IBM's LotusLive Engage, that helps groups of people inside and outside a company's protective firewall to work together - sharing documents, holding online meetings, chatting via instant messaging, sharing personal profiles and contact information, and performing simple project management tasks.

Because the software is delivered as an internet (or 'cloud') service, it can be accessed from almost any device and any location. People outside the team can be admitted as 'guests' with limited access to secure areas, so that, for example, the team could share a collection of documents with a client without the client being aware of the team's private discussions.

Gathering and sharing all the documents, data and activities connected with a project has spawned a new term, 'activity based computing'. We shall resist the temptation to say that it makes remote collaboration as easy as ABC, but it certainly promises a solution to the burgeoning problems of email overload and of getting hold of vital documents that are squirreled away on somebody's laptop.

"You can see people's eyes light up when they hear about it," says Darren Adams, messaging and collaboration leader at IBM. "People worry about the amount of time they spend reacting to emails and searching for information. Activity based computing lets you gather it all together, organise it and share it with the right people."

After decades as king of the desktop, the office telephone is finally about to join the blotting pad, the adding machine and the typewriter in the technological museum. Analyst firm Gartner predicts that, in North America at least, mobile phones will replace desktop phones as the primary device for business users by 2011, and it's already advising companies to consider phasing out redundant desk phones in favour of a single-number 'soft phone'.

The increasing digitisation of fixed and mobile telephony means that voice is becoming, in effect, just another data stream, enabling calls to be routed to just about any kind of device, from a conventional telephone to a desktop or pocket computer. There will be the potential to choose from a plethora of mobile devices, ranging from tiny, touch-operated telephones to pocket communication centres with high-definition screens capable of displaying complete web pages and video conferences, and powerful enough to run mainstream business software.

"Your mobile will let you create, consume, connect and interact," says Mark Selby, vice president for industry collaborations at Nokia. We may be able not only to take pictures and video footage but to edit them directly on our

phones, and create text documents via a keyboard, handwriting or speech recognition. We may be able to consume not only FM radio and MP3 music as at present, but video content obtained via a high-speed data link or stored on the phone's ever-expanding built-in memory. Connection options will range from faster WiFi, Bluetooth and broadband internet access to satellite positioning and digital broadcasting.

Phones could interact with the world around them via near field communications (NFC) sensors. NFC chips can be embedded in everything from ticket machines to advertising hoardings, potentially enabling a phone to double as a wallet, hotel door key or clocking-in card. Touching an NFC point could cause relevant information to be transmitted directly to the phone, whether it's details of the holiday we've seen on a poster or the technical manual for the equipment we've come to service. It may be the closest we ever get to reading the physical world like a book.

IT AIN'T WHAT YOU KNOW...

Communication may be the lifeblood of business, but why are some of us better at it than others? The science of social network analysis (SNA) aims to find out. The theory has been around since the 1960s, but the ubiquity of electronic networks and the ability to study what goes on in them is finally enabling it to deliver results.

"SNA lets you map out the communication levels between employees and with customers and suppliers, so you can identify the key influencers within your organisation and analyse the productivity of your people," says Sharifah Amirah, a principal analyst at Frost & Sullivan.

SNA involves analysing 'action' data - the time, duration, frequency and even quality of communications between people - combined with surveys asking who people choose to communicate with, whose opinion they trust etc. Key indicators may include whose blog is regularly read, what content is frequently downloaded, the number and length of emails or phone calls, how quickly people reply, and who initiated the exchange (it's better to be the person everybody asks for advice than the one who's always asking).

"You often find there are people who are bottlenecks - sometimes through workload or geographical location rather than because they're

poor communicators," says Clive Harris, chief innovation officer at IBM, which is heavily researching SNA. It may be possible to circumvent the problem by teaming up the 'bottleneck' - who may be highly experienced and otherwise good at their job - with someone who's been identified as a great communicator.

Amirah says SNA is a good way of assessing the value of the 'knowledge workers' who form an increasing proportion of the modern workforce - people who don't actually produce or sell anything tangible and measurable. You might find, for example, that someone in your sales team is great at generating new leads even though it's their colleagues who close the sale - rather like the soccer midfielder whose spot-on passes enable the centre forward to score all the goals.

SNA is also showing promise as a tool for customer analysis. "You can use it predict human behaviour patterns, such as customers who are likely to churn [change supplier], and work out who will be your best customers from a lifetime value perspective because of their social networks and 'viral marketing' effect," says Amirah. "It's astonishingly accurate, and some companies who've done it have cut customer churn rates by a third."

TRUE MOBILE BROADBAND

It's not the snappiest of names, but Long Term Evolution (LTE) is the next generation of mobile data technology that could finally close the gap between fixed and mobile networks.

Estimates of LTE's actual speed vary between 10Mbit (roughly equivalent to fast home broadband) and 100Mbit (the speed of a top-flight office network). But the experts all agree on one thing: LTE should be many times faster than the 3G technology we use today, and it will help enable a host of new and improved applications.

As well as much greater speed, LTE could almost eliminate 'latency' - the 3-4 second pause you get when refreshing a web page or accessing a document over 3G. This, plus the fact that LTE is a fully IP technology, could enable remote workers full access to their company's data and

telephone networks from any location, says Stephane Daeuble, LTE global marketing manager at Motorola.

You may not need to carry sensitive data around with you and risk leaving it on the bus, and there will be much smoother integration between fixed and mobile communications, so you could leave the office and transfer a live videoconference from your desktop PC onto your mobile. Fixed and mobile voice telephony will integrate seamlessly, so you should only need one phone number that will be automatically routed to the most convenient phone.

LTE will be fast enough for streaming (ie live-action) video, says Pieter de Klein from T-Mobile UK. This will help enable all manner of new uses, from live TV broadcasts and high-resolution CCTV surveillance to on-site inspections by surveyors or insurance assessors that are beamed back in real time to expert decision-makers in the office.

Rollout of LTE in the UK is expected to begin in 2010, with widespread coverage by potentially around 2012. By then the ending of analogue TV broadcasting could be freeing up the 700-800MHz frequency band. This is important, says Daeuble, because this lower frequency has a much greater range than the current 2-2.6GHz band (3-4km compared with around 1km) which could make LTE economically viable in rural areas that are not currently served by high-speed terrestrial broadband.

The first LTE devices are likely to be add-in cards and dongles, although fully-fledged LTE phones will follow, says Daeuble. He expects to see more choice in user technology, from conventional phones to large-screen devices suitable for video applications. Machines that aren't connected today, such as cameras, camcorders and even cars, will also start to contain embedded LTE chipsets.

BROADBAND AT THE SPEED OF LIGHT?

Terrestrial broadband speeds have now reached a theoretical maximum of 24 megabits per second (Mbit) thanks to ADSL 2+, which should be available to more than half the UK population in 2009. That's three times faster than conventional ADSL, but technical limitations and the practice of keeping prices down by sharing connections between several users

(known as contention) will mean that actual speeds are considerably lower for many users.

The existing telephone network can't run broadband any faster because, although trunk lines are fibre-optic, the lines from exchanges to users' premises are old-fashioned copper. So internet speed devils and firms with sizeable remote offices can't wait to get their hands on broadband that uses fibre from end to end.

BT plans to spend £1.5bn supplying fibre-based broadband to "up to 10 million" homes by 2012. The investment is huge because fibre must be laid to every premises, or at least to all on-street cabinets (the 'green boxes' on street corners). Fibre-to-the-premise promises speeds of up to 100Mbit, but only new-build sites are likely to get it. Other users will get fibre-to-the-cabinet, with a more modest initial top speed of 40Mbit.

This should be enough to run multiple bandwidth-hungry applications simultaneously, such as high-definition video conferences. Crucially for businesses, the 'upstream' speed (at which users' computers can send data) could increase by an order of magnitude - less critical for home users who mostly use broadband to receive material, but important for, say, a branch office wanting a real-time link to the company's central networks.

DON'T PRESS THE FLESH, PRESS THE BUTTON

While it's good to meet people in person, the pressures of time, cost and environmental responsibility are making increasing numbers of businesses look seriously at remote alternatives.

At the top end is 'telepresence', the next best thing to being there. Some systems have a huge screen wrapped around one half of a table so the two parties can almost literally sit down together, and analyst firm Gartner predicts that telepresence will replace more than two million air journeys a year by 2012. But thanks to ubiquitous broadband, inexpensive webcams and the increasing standardisation of conferencing technology, it's becoming possible to join a conference from virtually any device, from a room-sized system to a home PC or even a mobile phone.

In the early days video conferencing tended to be point-to-point within one organisation. But the modern way is to buy it as a managed service with a gateway enabling communication with other companies. This could give video the critical mass it needs, especially if it's taken up by supply chain 'hubs' who expect their trading partners to use it. "Within two to five years a significant number of organisations could have this technology," says David Critchley, a director of communications giant Cisco.

A lot of effort is going into making video conferencing more intuitive to use, both from the desktop and on dedicated systems. This, and the ubiquity gained from mass deployment on desktop and mobile, could be a strong driver for widespread adoption of video as the primary communication medium for business, believes Geir Olsen, EMEA president of video conferencing vendor Tandberg. "You'll only use a voice phone in the car," he says.

Although it's very useful to be able to look someone in the eye or read their body language, conferencing doesn't just mean video. It's also possible to share access to documents, annotating and changing them in real-time. Some people find data-sharing more productive than the video element, and there's growing interest in data conferencing systems with classroom-style electronic whiteboards or touch-sensitive table tops for interactive presentations and brainstorming sessions.

Despite the high cost of top-quality conferencing systems, some manufacturers claim that customers usually get their money back within a year in time and travel savings. But this isn't the only benefit. "I use video seven or eight hours a day, including two or three hours meeting customers in other countries," says Olsen from his home-office. "The ability to reach more customers and talk to more partners is much more important to me than saving the air fare."

HOME SWEET OFFICE

Work is increasingly becoming something you do rather than somewhere you go, and thanks to home broadband, wireless hotspots, mobile data services, unified communications etc, many of us can now work effectively from almost anywhere, including our own homes.

The rollout of ADSL 2+ and fibre-based broadband over the next few years could enable more home-based staff to access their companies' computer and communications networks as efficiently and securely as if they were in the office, says Jean-Marc Frangos, senior vice president of technology and innovation at BT.

"We'll see very high quality video telephony and telepresence for remote workers," says Frangos. "I'd be amazed if in three years' time this conversation [conducted by telephone from your correspondent's home office] hadn't happened over a reasonably high-definition, full-screen, full lip-synch video conference, with the ability to share documents in a portion of the screen."

One of the biggest barriers to successful home-working is persuading managers to let their staff do it. Having remote workers permanently connected to the office network helps to overcome this because it's possible to see what they're doing, says Steve Powell, product manager at business networking company Viatel. Direct connection via a dedicated line has always been expensive, so many companies have made do with internet-based 'virtual private networks' that require cumbersome encryption and may not be fast enough for full network access. Over the next few years Powell predicts that the price of fast, direct connections will drop to more affordable levels.

According to Frangos, the fashion for 'offshoring' call centres to India etc could give way to 'homeshoring' - self-employed agents working from home, either full-time or to provide overspill capacity at peak times. This approach can work particularly well for specialised skills that may only be required part-time or ad hoc. Before long, says Frangos, companies could be buying such expertise through online marketplaces where the experts will advertise their availability and charges.

In the longer term this approach could become more widespread, says Robin Mannings, a futurologist at BT. For many people the traditional nine-to-five working day could be replaced by an 'eBay' approach where they sell their time in small packages, perhaps of only a few hours. If your colleagues or trading partners are in Shanghai or San Francisco, your time package may include early mornings or late evenings but with daytime gaps for doing the school run or mowing the lawn.

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In the longer term the office as we know it could disappear entirely. "At BT the busiest areas are the coffee lounges where everybody's having ad hoc meetings," says Mannings. So we could see office desks replaced by 'Starbucks offices', run by facilities management companies who charge users by the hour - or even by the cup of coffee. "Instead of hot desking it'll be 'no desking'," says Mannings.

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