

# HANG ON — DON'T RUSH TO RING THE 4G CHANGES

### Britain is lagging behind in the latest mobile phone revolution — but that's no bad thing, says Mark Harris. Next-generation 4G handsets are quick but also power-hungry and expensive

Just when you thought it was safe to buy a zippy 3G mobile phone, along comes 4G to render it obsolete. This next-generation wireless technology will accelerate smartphones to fast broadband speeds, supercharging their ability to stream high-definition films, make crystal-clear video calls and play online games without appreciable lag.

wi-fi at home, the ThunderBolt comes with its own wireless hotspot built in. It can simultaneously link up to five gadgets such as tablets, laptops and internet radios to the mobile web. The ThunderBolt uses a 4G technology called LTE (long-term evolution) that is three times more efficient than existing 3G networks. That means web pages load faster, downloads run quicker and the airwaves are less like to clog up when everyone goes online at once.

Verizon Wireless, the US phone company spearheading 4G, says more than 110m Americans are already covered by its high-speed technology and it hopes to reach the entire country within the next 18 months.

Rival phone operators in America are also advertising "4G" services but some are merely using pumped-up 3G systems, and one is betting on a long-range version of wi-fi called WiMax. So Verizon maintains the edge, even though its LTE service still does not reach the International Telecommunication Union's official 100Mbps definition of 4G.

The HTC ThunderBolt is a mobile phone running Google's Android operating system. It looks like an undistinguished smartphone, sporting a large touchscreen and high-res camera. Fire it up, though, and you soon realise the difference 4G makes.

Web pages load in the blink of an eye, complete with graphics, images and interactive content. Click on a video link and it starts playing almost immediately, with none of the stuttering or jerkiness seen on today's 3G handsets. Downloading a song took just a couple of seconds.

In tests, the HTC ThunderBolt downloaded data at up to 12Mbps (megabits per second), which is about twice as fast as the average domestic British broadband connection. And just as you can share your broadband over

of 4G phones are bulkier and heavier than their 3G counterparts and don't compete well with Apple's sleek designs.

"If Apple comes out with a 4G iPhone at the end of this year, they will take a leadership position," says Bajarin. "It won't be just the 4G that makes that desirable, it'll be the combination of speed, the hardware — everything."

True, but Apple is unlikely to leap into 4G before the technology is standardised around the world.

There's another thing that may be holding customers back: super-fast 4G phones can run up super-sized phone bills. In America, owners of 4G phones are consuming far more data than they did before, with the result that some are getting a nasty shock when it comes to paying.

"America is a nation that is used to 'all you can eat' approaches for many things, so it's been very difficult to educate mobile users as to the true cost of their data," says Dan Hays, a partner at PRM, a global management consulting firm.

Plus, the new capabilities of 4G phones make them more power-hungry. ThunderBolt needs charging at least once a day, or several times a day when using its mobile hotspot

feature or if you are doing a lot of downloading.

Of course, the price of data transfer is likely to come down when the use of 4G becomes more widespread and not confined to early adopters. And the next generation of 4G phones is likely to be more power-efficient — and better looking.

So is Britain ready for 4G? Sadly, no. An auction for the 4G radio spectrum was meant to happen in 2008 but is now due in 2012. The first 4G devices will take a year or so beyond that to reach consumers.

The cash-strapped coalition government would love a repeat of the infamous 3G auctions a decade ago that netted £22.5 billion for the Treasury from over-eager phone companies. However, today's big mobile operators (O2, Vodafone, Three and Everything Everywhere) are keen to squeeze every last penny from current 3G networks before splashing out again on expensive new licences and technology.

The phone

companies have also slowed the auction process with legal challenges. This time around, the auction is predicted to raise less than £5bn.

"We're looking at years rather than months before we'll have a commercial 4G network in the UK," admits Tim Sefton, new business development director at O2.

Although the wait will be frustrating for smartphone users, being last to the 4G party could make sense. By the time companies here are ready to launch 4G services, it will be obvious which technology has won out, making it less likely that customers will be stuck with the wrong kind of 4G phone.

The downside? You might get your first 4G mobile just in time for it to be made obsolete by the first 5G devices.



## 4G IN THE USA

### MOTOROLA XOOM TECHNOLOGY: LTE

**MAXIMUM SPEED:** 12Mbps  
This 10in tablet is not as polished as the iPad 2, but it does have a 4G connection that enables top-speed web browsing and downloads while out and about. The new Android 3.0 (Honeycomb) operating system it uses is a class act, although there aren't many apps for it yet.



### HTC THUNDERBOLT TECHNOLOGY: LTE

**MAXIMUM SPEED:** 12Mbps  
Thunderbolts and lightning are nearly as frightening as the ferocious download speeds enjoyed via this 4G smartphone. It has built-in wireless technology to share its 4G connection with five wi-fi gadgets, and to stream HD video direct to compatible flatscreen TVs. However, the chunky ThunderBolt weighs about the same as Thor's supernatural hammer — and gets nearly as hot in use.



### GOOGLE NEXUS S 4G

**TECHNOLOGY:** WiMax  
**MAXIMUM SPEED:** 10Mbps

The second Android smartphone to bear the Google name has actually been made by Samsung. The 4in screen is one of the sharpest and most colourful on any smartphone, and its NFC (near field communication) chip means it has the potential to work as an Oyster card or wireless 'wallet' in the future. The WiMax connection it uses is the less popular 4G technology these days, though, and in the US at least has a reputation for slower, patchier service than LTE.



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## GAMES

New titles this week

**DIRT 3**  
★★★★☆  
Xbox 360, PS3; £40. Age 12

Power-sliding around a Kenyan dirt track before red-lining past the chequered flag has never been as satisfying as it is in the third outing of the rally-racing game. The visual polish, responsive handling and sensation of speed are already well-established features of the DIRT games, but this time out players get a lot more racing action for their gaming buck. There are now more than 50 cars to master, and a wealth of new tracks and locations to test your skills. The racing events have also been modified. Night-time stages add an extra edge-of-the-seat dimension; extreme weather conditions such as blizzards and rainstorms make handling genuinely more difficult; and the introduction of a "gymkhana" feature — time trials involving tricks such as drifting through gates or smashing into polystyrene blocks — adds an element of fun. For those craving human competition there's the addition of a splitscreen, two-player mode and online eight-player races. You can even broadcast your rallying talents to the world by uploading your replays to YouTube. All in all, this is not just the biggest and best DIRT game yet but the most comprehensive console rally title. **Steve O'Rourke**



**Brink**  
★★★★☆  
Xbox 360, PS3, PC;  
£35-£50. Age 16

Multipayer console gaming is dominated by Modern Warfare and its many clones, but Brink offers a welcome alternative to these military-themed shooters. Set in an overcrowded floating city in the future, Brink has no non-team mode. You play over the internet, or offline with the console providing the rest of the team of eight, as either the city's security forces or the rebels challenging the status quo. Having picked your side, you choose a role — from soldier to medic or spy — and battle commences. Like Modern Warfare the bullets fly, but Brink adds to the mix an exhilarating free running-style of action where your parkour skills are as important as your aim. The graphics are cartoony and the story line is derivative of a dozen sci-fi tales, but Brink's team-play action is compelling. **Stuart Andrews**



**SUNDAY TIMES ONLINE** ▶▶  
To see video trailers of InGear's games, go to [thesundaytimes.co.uk/ingear](http://thesundaytimes.co.uk/ingear)

## IPHONE GAMING

**Stuart Dredge** reviews the latest games for the iPhone, iPad and the iPod Touch

**GEARS**  
★★★★☆  
59p. Age 4

Rolling balls through 3-D mazes is a tried-and-tested game format, from Marble Madness through to Super Monkey Ball. Gears for the iPhone and iPad deserves to be ranked alongside those classics, thanks to its combination of breathtaking visuals and brain-bending puzzles. Gears offers three sprawling worlds to explore, each with a different visual theme: Steampunk, Volcano and Caves. The controls combine tilting the device with swiping the screen and work like a charm, while the numerous secret paths to discover and bonuses to unlock ensure plenty of replay potential once you've gone through the game for the first time.



**ORDER & CHAOS ONLINE**  
★★★★☆  
£3.99. Age 9

No, it's not a status update from Amazon. This is an online multiplayer role-playing game that basically is World of Warcraft remade for the iPhone and iPad. And it's a triumph. Its first success has been to reinvent mouse-and-keyboard controls for a touchscreen: pressing anywhere on the left of the screen controls your movement; anywhere on the right controls where you're looking; while spells can be chosen quickly via a virtual clickwheel. There's a choice of four races to play (elves, humans, orcs and undead), more than 1,000 skills to acquire and dozens of levels to conquer. Playing online over wi-fi is a smooth experience, and the ability to join guilds and parties replicates the all-important Warcraft-style social element. Be prepared to lose months of your life.



**AIR PENGUIN**  
★★★★☆  
59p. Age 4

A game involving birds, soaring up the iPhone gaming charts? We've been here before... but Air Penguin is a very different premise from Angry Birds. The game sees you guiding a penguin in his journey across the South Pole by tilting your iPhone in all directions, causing your feathered hero to jump between ice floes and gobble up fish. The graphics are basic but appealing and the gameplay is addictive, thanks to 100 levels to play, with more levels and new characters promised with free future updates. Survival Mode, where you simply have to see how far you can travel without landing in the jaws of a shark, offers more of a challenge for expert players, but overall this is really one for youngsters.

