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https://www.100test.com/kao_ti2020/234/2021_2022__E8_80_83_E7_A0_94_E5_BF_85_E8_c73_234973.htm Mobile devices The real energy crisis Jan 6th 2005 | NEW YORK From The Economist print edition How an old technology is constraining a new one "SEAMLESS mobility is here , " trumpet the latest advertisements from Motorola , one of thousands of consumer-electronics companies that converged on Las Vegas this week for the industrys glitzy annual shindig , the Consumer Electronics Show. Like Motorola , many of these companies will be hoping to persuade the shows 130 , 000 or so attendees that the combination of faster wireless networks , more powerful microchips and better display technology will usher in a new age of dominance for mobile devices. Yet as such devices-which often combine a phone , camera , music player and personal organiser-become more powerful , they are consuming more power. And that is the industrys dirty little secret : battery technology is not keeping pace. The news that Matsushita , a Japanese consumer-electronics firm , plans to launch a new sort of disposable battery technology (called Oxyride) in America and Europe illustrates the point. Matsushitas engineers have spent eight years working on their new battery , yet it lasts only 50% longer than an ordinary disposable battery. The technology behind the rechargeable lithium-ion and lithium-polymer batteries that power mobile phones and laptops is not evolving much more speedily. According to unpublished

research by the Boston Consulting Group , the amount of energy that a battery can store (its energy density) is growing by 8% a year. Mobile-device power consumption , meanwhile , is growing at more than three times this rate , as backlit colour screens , high-speed wireless networks and more powerful microprocessors draw ever-larger amounts of power. This growing gap between the supply (energy density) and demand for energy (see chart) is an indicator of the severity of the trade-offs which device-makers and consumers may have to make as battery technology increasingly constrains the evolution of mobile devices. Demand continues to grow rapidly , especially as mobile operators upgrade to new high-speed networks , which require more powerful handsets. Eventually , a new technology , such as miniature fuel cells , may solve the mobile-energy crisis. Until then , consumers will face stark choices. Some may be willing to recharge their devices more frequently. Battery life has already plummeted for certain devices. Musea , an all-in-one mobile device built to run on NTT DoCoMo's fast , power-hungry third-generation mobile network , advertises just 40 minutes of talk time with its screen fully lit. At airports , business travellers are increasingly to be found squatting beside inconveniently-placed power outlets , desperate to recharge phones and laptops before they board their flight. Some consumers have already learned to avoid power-hungry features such as video calling. Others are opting instead to lug extra battery packs around with them. Alarmingly , the American army's "Future Force Warrior" programme has calculated that the soldier of the future may

have to hump around the battlefield batteries weighing 34lb (15kg) to power his high-tech combat kit. That is one feature of the seamlessly mobile future that Motorola-the proud maker of the networked motorbike helmet and snowboarding jacket-will be happy to gloss over. 100Test 下载频道开通，各类考试题目直接下载。详细请访问 www.100test.com