



### Senator, 1982

Nokia's first carphone weighed in at a staggering 9.8kg



### Talkman 2, 1984

The first step towards hand-held heaven, Nokia's original portable phone weighed under 5kg



### CityMan 900, 1987

A sizeable improvement on 1982's Senator, the CityMan 900 was Nokia's first hand-held phone

Frank Nuovo seems somehow out of place on the frosty streets of Helsinki. Not lost, exactly, and certainly not unhappy, but different. Surrounded everywhere by tall blonds, Nuovo is a short, dark, carefully assembled man who looks as if he might be Jerry Seinfeld's younger, slightly more credulous brother. He dresses in tastefully coordinated palettes of grey, olive and black and, as he settles into a seat at a café along one of the city's central esplanades late on an afternoon, he falls into what can only be described as a fugue state.

We have been playing a geek parlour game – one that only Nuovo could have devised. As people pass, he guesses, simply by glancing at them, what model mobile phone they use. He is never wrong and, because Finland is the world's first great

wireless Utopia, he has plenty of material to work with. In Helsinki, nearly everyone carries a phone and it often seems that people there are speaking or sending each other text messages every moment of every day. Three teenagers approach, all with brightly coloured, elliptical pieces of plastic attached to their ears. "The classic," Nuovo says, by which he means that they are using the basic model introduced by Nokia three years ago – the 5100 series, whose removable faceplates created an international market for colourful, personalised phones. "Look," he says, pointing to a crisply dressed businessman. "That guy has to have the new version of the Communicator," a gizmo that lets people surf the web, download news clips, fax and chat. "I'll bet he got it the very

week it came out." Suddenly Nuovo stops speaking, and his breathing slows. His eyes fasten on a tall woman who has just broken into a run, about 15 yards away. She is clearly angry. We can see her moving fast in high heels, screaming into her telephone and carrying a large bag. It's not easy to do all that at once.

"Look at her," Nuovo says with genuine delight, as if he is an anthropologist who has stumbled upon some new tribal custom. "She has a 6110 rigged with a strap. I have never seen that in Europe." The 6110 has an illuminated high-graphics LCD display, an infrared link to compatible devices, and 35 different ring tones; what it doesn't have is a strap. Yet, as the woman runs past us, we can see it fastened comfortably to the palm of her hand. "I'll

## How Nokia made the world's bestselling phone

Nokia, the Finnish telecom titan responsible for more than a third of the world's mobile phones, used to spend its time making rubber tyres. But in the last ten years the company has embraced cellular technology to become the revolution's ringleader.

Story by Michael Spector



### 101, 1992

The Nineties heralded the introduction of Nokia's first pocket phone. The design of the 101 was revolutionary; the amount of space between the keypad and scrolling keys, plus the curved oval shape of the earpiece holes and screen were part of Nokia's design aesthetic creating, as Nokia's Erik Anderson says, 'a feeling of coherence, of understanding which is both intellectual and emotional. It is a sense of organic rightness'

be damned," Nuovo says. "The Japanese do this. So do the Koreans. They all have straps, and they decorate them in every conceivable way. But I have never seen that in Finland. I guess I'll have to start paying more attention."

Nuovo already pays a good deal of attention to the 6110 series, because he designed it. He also designed the slightly more prosaic 5100 – it ranks among the most successful pieces of consumer electronics in the world – not to mention Nokia's gleaming, *haute couture* 8800 phone, the minuscule, intensely fashionable digital accessory that the company introduced on the runways of Paris and Milan, rather than in the usual teleconferences for business journalists. In fact, starting with the Nokia 101 in 1992,



### 8110, 1997

The new, curve-shaped Nokia 8110 combined innovative design with functionality

### 8850, 1999

Nokia's 8850 combined exceptional design and comprehensive features, with a cover made from a mix of aluminium and magnesium



### 3330, 2001

Nokia's 21st-century phone came with a new expression category handset with WAP access to entertainment services



the first truly global phone, and working from a decidedly un-Finnish office in a high-end strip mall in Southern California, Frank Nuovo has designed nearly every mobile phone that Nokia produces. If you don't count fast food items like cans of Coca-Cola or ephemera like Kleenex, Nokia phones may be the bestselling products on earth.

That makes Nuovo the Henry Ford – or, at least, the Calvin Klein – of cellular communication. More than any other person, Nuovo has set forth a vision of the mobile phone as a personal accessory – a fashion item like a watch or a pen. He is convinced that within a few years having just one phone will seem as odd to most people as owning a single pair of shoes. A decade ago, mobile phones were mainly

curios for the rich; fewer than ten million people had used one. This year, the figure will inch past a billion. Perhaps no industrial product has had a more rapid effect on a greater number of people.

"Nokia started to take off just as the Soviet Union was falling apart," JP Roos, a professor of social policy at the University of Helsinki, who studies the effect of mobile phones on society, tells me. "Finland was in desperate shape and the mobile phone created a new culture." It became the symbol of a world in which people wanted to be independent yet connected. "I don't know how you label that culture," Roos says. "It is clearly about style and form, but when you slip this small piece of plastic into your hands and see what it has done – well, I don't think ▶

► the automobile had a bigger effect on the way people live, or what they expect from their lives.”

When I first meet Nuovo, at his office near Los Angeles, I ask about the mechanics of industrial design: how does one make a piece of equipment that will find its way into the hands of a sizeable portion of the world's population? “My only goal is to create something people need to have,” Nuovo says. “They need to have it because it's useful and because it improves their lives in some clear way. If it's a lovely phone, they will want it more – for the same reason a woman buys a fabulous dress, or maybe for the reason you choose a particular car. You might need the dress or the car. But you also have to want it.”

Although Nuovo is the vice president in charge of design for Nokia, he has never moved to Finland (despite many requests from his bosses), because he believes that Los Angeles, as the centre of the American image industry and of its automotive soul, is the place where beauty and style matter most. Nuovo is a former jazz drummer from Monterey who grew up worshipping such American icons as Charlie Parker. He is 40 and was raised, he says, in a world dominated by *The Jetsons*, *Lost In Space* and *Star Trek*. “The fascination with gadgets and the interaction with cool things was a basic part of my life. My age is the space age, the age of incredible instruments. And they are beautiful, by the way. They don't really work if they are not beautiful.”

After graduating from Pasadena's Art Centre College of Design, Nuovo got a job at Designworks/usa (which is now an in-house design shop for BMW). There he became involved in a project to improve the ergonomics of air-traffic control consoles. (“That's a system where design isn't just nice, it's vital – you really don't want to hit the wrong button by mistake.”) He also designed sewing machines, car dashboards, and patio furniture. He started working for Nokia as a consultant when he was 28. “It was Christmas and a company named Nokia called. I had no idea where they were from. I assumed Japan. At that time, big bag phones, the kind you'd carry in a suitcase, were all we had. But I had been working on dashboards, and they were always on my mind. So when they asked me to design a car phone I said sure, why not?”

Nuovo's California office is a sort of hidden Disneyland for gadget freaks. There is no Nokia sign on the door or on the building. Nuovo worries about security and industrial spies. He asks me not to print the name of the town where he and his team of designers, colour experts and



Frank Nuovo, Nokia's vice president in charge of design, pictured at Nokia's HQ in Finland

### Nuovo's office is a sort of Disneyland for gadget freaks

material scientists work. Inside, the studio looks as if it might belong to a clothing designer. Drawings of the slinkiest creations by Versace and Chanel are pinned on the wall, as are sketches of the most outrageously futuristic-looking cars, bicycles, even rollerblades.

Nuovo is particularly proud of his vast collection of pens, all arranged like trophies on the shelves. Some are expensive and rare, made of titanium, cork, or single strips of unusual wood; others are cheap, the familiar sticks of injection-moulded plastic. Nuovo loves pens because they are “simple, simple, simple,” he says. “They do just one thing, and they come in an almost endless assortment of designs. Just like phones.”

In general, Nuovo favours bubbles and elliptical shapes, the aerodynamic icons of speed. Phones are everywhere in his studio: in cradles, on desks, on the wall. Most are prototypes. He produces the earliest versions out of wax on what is essentially a 3D printer – but not before he draws them. Nuovo sketches phones habitually. In fact, during meetings Nuovo

may often take notes, but he always draws telephones. When he's starting to design a new model, he typically roughs out his first drafts on anything – an envelope, a notebook or the back of a fax. Then he puts the design on a piece of tissue-thin paper to show his colleagues in LA, often leaving the next step of the process – the refinements made possible by computer-aided design – to them.

“In 1991, everyone had boxy little phones with rectangular displays,” he says. “Most of our competitors did all they could to pack in every possible feature. I thought we needed space. Believe me, it was a very radical thing to put empty space on a phone then.” At this point, Nuovo grabs my phone, which is very small. “Feel the ridge between these keys. They are actually touching, but you can feel the distance because of the topography. They are the best keys for the size that you can have. Many people want a very small product. But, obviously, if you do an ergonomic study you will get into something this size.” He reaches across the table to grab a larger telephone. “You can do ‘perfect reach’ studies, and if you take the largest person with huge hands and the smallest person with tiny hands you can find an optimal average. We hit a sweet spot between large and small that accommodates all sizes – it's the 6110. But if you hit only that medium everything will always look that way. It's boring. So there is always this clash between form and function in every design. Look at women's shoes: for the sake of style, women will wear shoes that are expensive and painful.”

He reaches for a gold version of the 8850, a costly little phone that was introduced in 2001 in Asia, and has a cult following. ►



### Nokia 7650, 2001

Nokia's latest phone to arrive on the market is the 7650 – launched in the US in 2001 – which will be available in Europe later this year.

The phone combines a digital camera and multimedia messaging (MMS), enabling you to combine audio, graphic, text and imaging content in one message – and there's even an album to store your favourite photographs

► "This never made it to the market in the US. When this first came out, it was going for £2,000. It was unbelievable what was happening. Take this stylistically – I call this the pressure wave." Nuovo caresses the two little ridges on the lower half of the phone. You wouldn't even notice them if you were not looking for them.

"Think about cars, aerodynamics, wind tunnels. Look at our styling here – it is so copied around the planet. The language we have put forward is about the emotion of speed and increasing velocity. The influence of the auto is there, of course. But it's not about cars. It's about movement and it's about" – he pauses before delivering his mantra – "the attempt to do one thing well."

Nuovo thinks that too often designers overlook this consideration. For years, the companies that make mobile phones – and many of their customers – have pursued a sort of grand unified theory of gadgetry, seeking a phone that will do everything: keep schedules, record memos, play music, surf the web. "Today, the kids are all obsessed with convergence," he says. "Young industrial designers often want to be modular. They want to make vacuum cleaners that can mix drinks and lawn mowers that serve coffee. But a product needs to be about something. It can't be about ten things. I would rather have five phones that do five things than one that does a little bit of everything. Right now, that seems strange to many people. But soon it won't. How many brilliant combos are there? Can you think of a more brilliant combination than a pocket and a phone?"

Nokia is the most Finnish of companies and, to an uncanny degree, its history reflects the transformation of Finland itself, from an insignificant duchy to one of the world's most wired – and wireless – countries. Nokia – and the town of the same name – was founded more than 130 years ago, near the southwestern Finnish city of Tampere. It began as a producer of paper and pulp, and at one time was a leading manufacturer of rubber boots. (These are considered collectors' items; occasionally a pair is offered for sale on eBay.) It has also produced tyres, television sets and electricity. By the early Nineties, however, Nokia decided to focus on cellular communications. It was seen as a risky decision, but the first call using GSM, or Global System for Mobile Communications, was placed from a Nokia phone in Finland, in 1991. GSM became the technology that permitted phones to roam throughout the world, and Nokia helped create it. It also ►

# The best ways to communicate

GQ's definitive guide to the top ten mobile phones available



## 1 Nokia 5510

Rather than produce another work-oriented PDA/mobile phone, Nokia has come out to play and created the 5510 – a mobile entertainment platform. This strange-looking phone is a combination of keyboard, hand-held gaming system, digital music player and stereo FM radio. The phone can be linked to a PC so that you can rip and download CD or MP3 tracks, and it is equipped for WAP internet access.

**The clincher** The 64MB memory can store up to two hours of music.

£285. For more info, visit: [www.nokia.com](http://www.nokia.com)

## 2 Motorola V Series 66

Motorola's sleek new clamshell mobile will have you reappointing your wardrobe and trading in your car to match. The phone provides "always on, always connected" internet access in one of the smallest and best-looking GPRS tri-band phones on the market, which can be personalised with interchangeable fronts in black onyx, seashell and water drops – or with a choice of red, yellow or green backlighting.

**The clincher** A phone book for 500 entries and a standby time of up to 125 hours.

£353. For more info, visit: [www.motorola.com](http://www.motorola.com)



## 4 Motorola Accompli 008

This cigarette packet-sized clamshell-style mobile phone boasts handwriting recognition, a GPRS web browser and e-mail facility. The large screen is clear and functional, and the navigation through screens and applications is simple. This "all-in-one" can also be connected to a PC in order to update applications and keep diary and memo entries current.

**The clincher** This stylish multitasker's virtual keyboard ring tone composer – complete with its own extendible stylus – can be "played" – it'll make a Mozart out of any mobile user.

£385. For more info, visit: [www.motorola.com](http://www.motorola.com)



## 3 Nokia 9210

As a mobile phone, the 9210 Communicator may seem a little cumbersome, but beneath the inch-thick exterior lies a technological Aladdin's cave of innovation. This micro computer has a full colour screen, WAP and internet access, fax and e-mail capabilities and full word and spreadsheet software. It can also be hooked up to a digital camera via infrared to store photo albums and short video clips.

**The clincher** The address book has space for comprehensive information on clients and friends, including a colour photograph to jog your memory.

£800. For more info, visit: [www.nokia.com](http://www.nokia.com)



## 5 Samsung A400

The A400 is a sexier, more stylish, version of the A300, which featured a double display. This blue clamshell can hold a 100-name phone book, run conference calls, keep your diary up to date and let you check your e-mail and surf the net through its WAP browser.

**The clincher** The metallic blue finish – it's possibly the best-looking phone on the market.

£100. For more info, visit: [www.samsungelectronics.co.uk](http://www.samsungelectronics.co.uk)