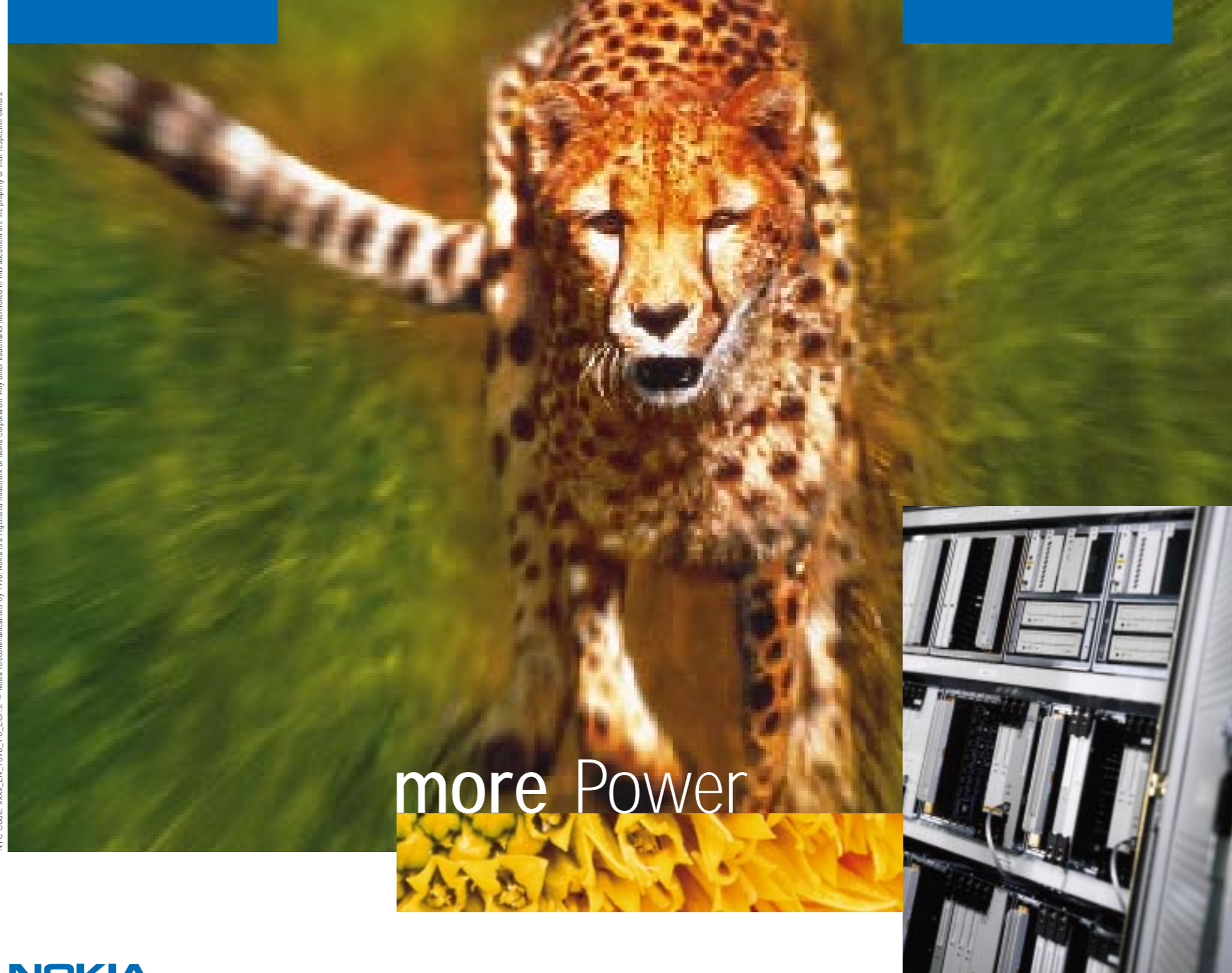


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more Power

NOKIA
CONNECTING PEOPLE

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Nokia GSM Network Subsystem
Established, but evolving to meet new challenges

NOKIA
CONNECTING PEOPLE

Solving the challenges you face
Faced with explosive growth in mobile phone penetration and usage, all operators are striving to implement large networks in more cost effective ways. A key element in achieving this is to minimise the cost of switching sites, which are usually rented and, with stringent site requirements like air-conditioning and security, can incur substantial monthly rentals.

Our latest enhancements on the DX 200 mobile switching platform, the DX 200 i-series, address exactly this issue. More processing power and greater capacity, all contained in packages with a remarkably small footprint, mean the DX 200 will help keep your site costs down.



The cornerstone of the Nokia GSM Network Subsystem is the DX 200 digital switch – a field-proven platform that for years has provided the foundation of both wireline and mobile telephony. Although well established, we at Nokia have not sat back and let the DX 200 fall behind its rivals. Continuous development has enabled us to introduce a set of highly integrated and more powerful components to meet the needs of wireline and mobile networks, today and tomorrow.

Nokia DX 200 switching - the evolutionary platform
Our Nokia DX 200 platform uses a distributed processing architecture, which provides a solid base for the introduction of new services. Advanced services, such as those based on Intelligent Network technology and multislot, high speed data-applications, place greater signalling demands on the switching platform. Dedicated computer units are used to manage different functions and it is in these units that the DX 200 concentrates its processing power, where it is most needed.

The continuous introduction of new software demands more powerful processors. The computing power of the DX 200 is based on Intel processors, which allows easy upgrading as new, more powerful versions are introduced. We have also given the DX 200 parallel processing capability allowing it to handle simultaneous multiple processing tasks. DX 200 has been developed with Intelligent Networks (IN) in mind. With dedicated processors to manage the increased signalling caused by IN, the DX 200 can offer the same performance even when all calls are IN calls.

IN is often viewed as an additional processing burden for a switching centre. However, with Nokia DX 200, you no longer need to see the coming boom in IN calls as a threat to your network's capacity. Instead you have an opportunity to promote heavy telephony usage combined with attractive new services, to give you the edge over your competitors.

Nokia DX 200 grows with your network needs
Cost effective capacity is one of the DX 200's greatest benefits. The DX 200's modular architecture allows you to implement exactly the right amount of capacity no matter what size your network. You avoid excess capacity and all its associated costs.

All Nokia DX 200 products can be easily expanded, allowing you to increase your subscriber database and

call handling capacity quickly and easily to meet unexpected, increased traffic. Capacity is cost-effectively achieved by expanding only where expansion is needed. For example, the subscriber database in the Mobile Switching Centre/Visitor Location Register (MSC/VLR) and the Home Location Register (HLR) can be expanded, without having to implement unnecessary increases in call handling and signalling capacity.

Nokia DX 200 for any need - it's your choice
The DX 200 i-series products are our most extensive range yet and complement our existing DX 200 range. DX 200 i-series offers you solutions for all your network design needs and is based on the same software to minimise your software management costs for the entire network.

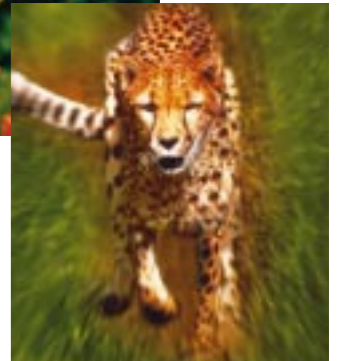
DX 200 MSCi– This Mobile Switching Centre offers high capacity for large networks. The DX 200 MSCi meets the demands of even the most densely populated cities by offering a market leading 400,000 subscribers generating up to 400,000 IN-based Busy Hour Call Attempts (BHCA).

DX 200 HLRi– A high capacity Home Location Register for networks of any size, scalable from 120,000 to 1,200,000 subscribers.

DX 200 Compact MSCi – With an exceptionally small size, this MSC is the answer for rural and other areas with fewer subscribers, where you can save transmission costs with local switching. Compact MSCi is available with a capacity of up to 50,000 subscribers.

DX 200 Transit MSCi- Designed with GSM especially in mind, this product plays an essential part when optimising large networks. The Transit MSCi manages all the traffic between the mobile network and the PSTN, reducing the amount of transmission required and minimising the network's operating costs. This high capacity switching centre offers up to 1,200,000 BHCA.

Large capacity with a small footprint
Faced with expensive rentals at your switching sites, every square metre of floor space saved is a bonus. Which is why DX 200 products pack as much capacity into as small a space as possible. Even the largest capacity MSCi is 'squeezed' into only 15 cabinets, requiring no more than 43 m² of site space.



The Compact MSCi takes this design philosophy even further. With a capacity and functionality comparable to that of many other commercially available MSCs, we have squeezed the processing power required to support 50,000 subscribers into just two cabinets, without compromising performance.

Nokia DX 200 brings versatility for value added services
In addition to handling processing intensive services, like IN calls, Nokia DX 200 switching centres are capable of implementing an extensive range of ETSI specified GSM services. Services supported are for example: Completion of Calls to Busy Subscribers (CCBS), MultiParty Service, Closed User Group, Explicit Call Transfer and all relevant GSM Call Forwarding and Call Barring services.

A wide range of data and messaging services such as High Speed Circuit Switched Data (HSCSD) and General Packet Radio Service (GPRS) are also supported.

Furthermore, we are constantly implementing proprietary services that help operators differentiate themselves in the market by introducing value added services, such as regional tariffs and regional service access (individual regional networks) to specific target groups.

The support for the IN protocols, Core INAP and CAMEL, offers you numerous possibilities to implement personalised speech services to each of your subscriber segments.

Even the largest capacity DX 200 MSCi of 400,000 subscribers requires no more than 43m² of site space

