

# 2004 ABB Sustainability review summary



Making a difference



# Letter to shareholders

## Making a difference



"To us in ABB, sustainability is not an add-on – it is an essential part of our business."

Jürgen Dommann  
Chairman,  
ABB Ltd

### Sustainability highlights

- Health and safety training courses for top managers held worldwide in campaign to improve group performance
- Assessment starts to determine if ABB will become CO<sub>2</sub>-neutral company
- ABB develops and road tests human rights checklist as part of international business initiative to protect and promote human rights
- Power turned on in remote Tanzanian village, marking first concrete results of Access to Electricity program
- Progress in phasing out hazardous substances, including chlorinated volatile organic compounds
- Stakeholder dialogues held in 15 countries
- ABB in Italy wins prestigious Sodalitas award for sustainability policies – mainly for wide range of social programs
- More than 200 volunteers from ABB in Germany work at Special Olympics for disabled held in Hamburg
- ABB receives environmental leadership award from Ford Motor Company for product performance

ABB made steady progress in 2004, with our core divisions – Power Technologies and Automation Technologies – posting double-digit growth in orders and revenues. Overall in 2004, ABB improved operational performance and results, strengthened finances and regained the path of profitable organic growth.

Improved results mean we are better placed to strengthen our social and environmental performance, to fulfill our responsibilities to stakeholders – shareholders, customers, employees and society – and to play a more active role in international efforts aimed at making business act on its responsibilities to society.

To us in ABB, sustainability is not an add-on – it is an essential part of our business. It is ABB's way of making a difference. Sustainability is built in to the products and systems we develop and provide to help our customers improve power grid reliability and increase industrial productivity.

These products, systems and solutions are designed to increase energy-efficiency and reduce costs, and therefore have a direct impact on the financial success of ABB and our customers.

To track our performance on the "triple bottom line," ABB is following the guidelines of the Global Reporting Initiative (GRI), for the fourth year in a row, reporting on our efforts to promote sustainable economic, environmental and social development.

Using this data we can provide a clearer picture of how we generate economic growth, lower the environmental impact of our own and our customers' businesses, and promote social progress.

In 2005, we continue as an active participant in a number of business efforts on sustainability issues – from expanding our Access to Electricity rural electrification program to our efforts in the Business Leaders Initiative on Human Rights, which aims to help businesses find pragmatic ways to protect and promote human rights.

One of the main challenges that society faces is climate change. ABB has a role to play throughout the value chain – our research and development work, our products themselves, in our manufacturing centers around the world, and through our business relationships with suppliers and customers. We have the technology to make a difference .

An area where we continuously strive to improve is in the health and safety of our employees. Every injury or death at an ABB workplace or at a subcontractor is unacceptable, and we took further measures in 2004, and will take more in 2005, to secure further improvements.

We believe a sustainable approach to business pays off, and are committed to it. We will continue to review our activities and ensure that our contribution to the triple bottom line is as beneficial and balanced as it can be.

Sincerely,

Jürgen Dommann  
Chairman, ABB Ltd

# Challenges and contributions

## Climate change: how our technologies make a difference

**Climate change is one of the biggest issues we all face. The degradation of the environment, pollution, reliance on non-renewable sources of energy, poverty and overpopulation are crucial problems, whose impact is more severe and noticeable than ever.**

ABB's products, systems and solutions are designed to have the lowest possible environmental impact, as we press ahead with our goals of helping our customers strengthen power grids and improve industrial efficiency. At the same time, we work closely with suppliers and customers to ensure they demonstrate the same commitment.

We began an investigation in 2004 on the possibility of becoming a "carbon-neutral" company in the medium term. We produce about 1.5 million tons of CO<sub>2</sub> emissions annually (measured according to Greenhouse Gas Protocol Scope 1 and 2), which is relatively low for an industrial company. As well as planning for the future, we are involved in ongoing efforts to reduce carbon emissions, as well as other harmful substances.

The implementation of the Kyoto Protocol and the start of carbon trading in the European Union in 2005 are setting new parameters for many of our key customers, and they also mean that carbon emissions now have a financial value.

Coupled with this, new regulations and increased energy costs have led to growing awareness of the need for energy efficiency.

ABB is optimizing energy efficiency with a wide variety of products and solutions in our own businesses. We are helping our customers to do the same in areas such as power transmission and distribution, power generation, industries such as cement, pulp and paper, mining, chemicals and oil and gas, as well as at factories and buildings worldwide.

Take the power sector, for example. Our leading-edge management and control systems, Optimax and Combustion Optimizer, have helped hundreds of power plant operators around the globe to improve their operating efficiency. The same critical level of power is generated but less fossil fuel is used.

The journey so far	1992	1993	1994	1995
				
	<p>ABB signs International Chamber of Commerce Business Charter for Sustainable Development, establishes its environmental affairs organization and sets up an environmental advisory board.</p>	<p>Network of environmental controllers appointed for countries and factories. Thirty-eight countries participate in start-up of ABB's environmental management program. First reporting procedures introduced.</p>	<p>Implementation of environmental management systems is set as group-wide objective, involving 43 countries. ABB publishes its first environmental report.</p>	<p>ABB publishes its environmental objectives and launches design tool for life cycle assessment of products. Fifteen sites certified to BS 7750 or EMAS environmental standards.</p>

# Challenges and contributions

## Climate change: how our technologies make a difference

ABB systems Modan and Modakond optimize the operation of turbines and boilers in steam power plants, leading to efficiency gains of up to 0.5 percent. This gives customers a truly valuable return on investment – cutting costs and reducing environmental impact.

Many industries and plants benefit from the energy efficiency of ABB's drives. ABB is the world's top supplier of variable speed drives which reduce energy consumption by closely regulating the speed of motors.

Worldwide, ABB drives help to save some 80TWh (terawatt-hours) of energy every year, the equivalent of ten 900 MW (megawatt) power plants. These savings translate to a reduction in CO<sub>2</sub> emissions of 68 million tons per year, more than the annual emissions of a country the size of Finland.

Renewable sources of energy could make a more significant contribution to power needs, particularly in Europe, but we must ensure that transmission grids are sufficiently developed to collect and deliver that power efficiently and reliably.

ABB has the technology to improve the generation and transmission of renewable sources of energy. We provide vital components for wind parks, including generators and converters, transformers, switchgear and control systems.

But the issue is much greater. A grid must be able to collect power from sometimes remote areas and transmit it to centers of consumption. What really counts is not how much power is generated, but how much power is efficiently delivered.

An effective means of connecting volatile power generators like wind parks with power grids is ABB's unique HVDC (high voltage direct current) Light technology which has many environmental benefits: no electromagnetic field, low transmission losses for linked AC grids, oil-free cables, and lines which can run underground or underwater.

Key technologies to stabilize grids also include FACTS (Flexible AC Transmission Systems) and conventional HVDC transmission technology.

1996



ISO 14001 is introduced. A total of 50 sites gain certification, including first site in China and first construction site.

1997



123 sites gain certification to ISO 14001. ABB publishes second generation of environmental objectives and launches second-generation life cycle assessment software tool and database.

1998



ISO 14001 is implemented in 449 sites. ABB's CEO serves on World Commission on Dams, which produced guidelines for hydroelectric power projects. Summaries of ABB's environmental report published in 23 languages.

1999



ABB produces first environmental product declarations (EPDs). ABB's CEO initiates World Energy Council's greenhouse gas reduction program. ISO 14001 is implemented in an ABB Black Economic Empowerment company.

2000



ABB launches social policy and publishes first sustainability report including both environmental and social performance. ABB participates in launch of the United Nations Global Compact. ISO 14001 is implemented in 539 sites.

The need for new power grid interconnections, as well as transmission and distribution lines, is evident. New investment should prioritize these high-end technology solutions that get more out of existing grid capacity while minimizing energy losses and lowering environmental impact.

We also seek to minimize the environmental impact caused by transportation – our own and our customers'. This ranges from cutting the amount of air travel to increasing use of rail rather than road transport for products, and developing technologies such as Compact Azipod propulsion systems for ships which increase maneuverability and reduce fuel consumption.

ABB is committed to working with other stakeholders to develop sustainable energy practices across the value chain, and promote both sound regulatory frameworks and more careful use of energy in society. We are contributing aggressively, but there is further work ahead.

### ABB's next steps towards CO<sub>2</sub> neutrality

ABB has identified the following steps as key, as it considers becoming a carbon-neutral company.

- Establish a comprehensive system to measure emissions
- Produce a detailed plan to reduce our emissions
- Create emission-reduction projects with customers to offset our remaining emissions
- Verify our performance through third-party assessment
- Invite stakeholder feedback and promote CO<sub>2</sub> neutrality along the value chain

#### 2001



Dow Jones Sustainability Index rates ABB top of its group for the third year. ABB produces first "triple bottom line" sustainability report, inspired by the Global Reporting Initiative. ISO 14001 implemented in 98 percent of sites.

#### 2002



Sustainability business plans implemented in 50 countries. ABB launches "Access to Electricity" initiative at World Summit in Johannesburg. Environmental program expanded to include employees in non-manufacturing facilities.

#### 2003



ABB to implement health and safety systems based on OHSAS 18001 by end 2004. First "Access to Electricity" projects in Tanzania. With other companies, ABB launches Business Leaders Initiative on Human Rights. New environmental policy launched.

#### 2004



Health and safety training for top managers begins worldwide. Group-wide conference addresses diversity issues. ABB starts investigation to become a CO<sub>2</sub>-neutral company in the medium-term. Implementation of new environmental policy continues worldwide.

# Case studies

## Triple bottom line in action

ABB aims to contribute to economic growth, environmental stewardship and societal development through its businesses.

The Global Reporting Initiative's triple bottom line guidelines, covering the economic, environmental and social dimensions of a company's activities, provide a valuable yardstick in measuring performance.

Here we present three examples of how our activities in different countries, are strengthening economic growth, lowering environmental impact and fostering social progress.

### Ships plug into an environmental success

The biggest port in Scandinavia is offering visiting vessels the world's first high-voltage shore connection. This environmentally friendly idea, supported by ABB technology, won the port of Gothenburg in Sweden a Clean Marine Award from the European Union.

"We knew the concept we wanted, and ABB solved it for us technically," says Per Lindeberg, the man in charge of the port's electrical installations. ABB's delivery included the maintenance-free 12 kV (kilovolt) switchgear SafePlus, relay protection, the low-voltage switchgear MNS and Resiblock transformers.

Ports are not normally equipped to supply vessels with electricity from shore. In most cases, ships at dock get electricity from their auxiliary engines burning diesel or heavy marine fuel oil. The ships' engines power electric generators on board which run the vessel's heating system, fan drives and pumps.

When they dock at Gothenburg, ships are quickly and simply connected to a single high-voltage cable, which means their engines can be switched off and pollution from exhaust gases and noise is eliminated.

The EU calculates the new system eliminates 80 metric tons of nitrogen oxide, 60 tons of sulphur dioxide and two tons of solid particle emissions each year. Electricity for Gothenburg's dockside service is generated partly from wind power.



Ships can now receive power through a single source onshore and cut their exhaust gases.

### “At home” everywhere

Being “at home” in a community where a business is based is key for ABB. There are a number of sometimes unconventional ways, outside business, in which the company can help the community.

In Argentina, for example, ABB started a farming school in 2004 to help ease food shortages and raise the standard of living of farmers, who had been hit by a downturn in the sugar cane industry.

Working with a non-governmental organization, ABB set up the farming school on a 10-hectare plot of company land, adjoining a low-voltage factory in Bella Vista, a town in northwestern Tucumán province.

Groups of people are now taking part in six-month intensive training courses on the ABB land, being taught how to raise crops, run a small farm and conserve food. They learn how to be self-sufficient before returning to farm their own small plots of land.

About 40 people completed the courses in the first year, and most of them are now working for themselves on their own land. The project, although small-scale, is helping to ease the plight of some members of that community.



People learn new farming methods on ABB land, which helps them to improve their living standards.

### How to make a difference locally

ABB in India expanded operations at its power technologies hub in Vadodara in 2004, reflecting the company’s ongoing growth. The local benefits extend beyond business.

Several new lines, including a distribution transformers plant and high-voltage machines have been added at the state-of-the-art factory. The expansion has led to further jobs and a boost for local suppliers.

On the social front, ABB adopted a government primary school in Vadodara in 2004, continuing its countrywide policy of promoting education for less privileged children.

The school in Makarpura village, with 1,800 pupils, lacked basic amenities when ABB stepped in. Work has now been completed to provide clean drinking water, renovate washrooms, strengthen walls and paint classrooms.

As in other Indian cities, ABB also sponsors “greening initiatives” in Vadodara. This involves planting and maintaining gardens, shrubs and trees at parks, roundabouts, road verges and the airport.

That same care for the environment is visible at the factory, set in a lush green park with carefully tended lawns and extensive trees and bushes, which also keep dust out of the plant.



Vadodara airport is one of the city areas benefiting from ABB’s greening initiative.

## Common efforts

# Promoting sustainable development in Africa

Power provided by ABB was turned on in a remote village in southern Tanzania in 2004, sparking immediate economic, environmental and social benefits for members of the local community.

The 1,800-strong village of Ngarambe, on the edge of the Selous National Park, received electricity under ABB's Access to Electricity program which is designed to promote sustainable development in rural and semi-urban communities in Africa and Asia.

The benefits are already visible. Power from a diesel-fired generator supplied by ABB is lighting up the village school, dispensary, local government office, mosque, small businesses and a number of homes. Small shops, restaurants and clothes makers on the main road take advantage of the electricity to stay open an additional four hours every night.

The local school holds classes after dark. "The pupils can study more for their exams, and it will be beneficial to society," says a teacher. The number of pupils has risen from 250 to 350 since the arrival of electricity.

And at the dispensary, the doctor can now also treat his patients at night. In addition, he is intending to install a refrigerator for medicines. The measures will save some of his patients from the lengthy journey to the nearest hospital 70 kilometers – or two hours' ride – from Ngarambe.

The villagers pay for their power. Discussions are held with the village authorities to set an affordable and viable price. Current limiters prevent individuals exceeding what they have paid for.

ABB and WWF, the global conservation organization, teamed up to ensure the sustainable development of the village. Apart from supplying the generator, ABB installed underground cables and low-voltage equipment, and trained local people to run the power supply. WWF provided guidance on issues ranging

from reducing deforestation to healthcare and environmental education.

The project is serving as a model for further, larger Access to Electricity projects aimed at easing poverty in other areas. ABB launched the program in response to the United Nations Global Compact which urged companies and organizations to provide greater assistance to least developed countries. ABB was one of the first international companies to sign on to the Global Compact after it was launched in 2000.

Partnership is a key part of the program. ABB works with other stakeholders – governments, companies, non-governmental organizations, aid agencies, civil society – with each partner bringing its complementary skills to the project.

It's a commercial, as well as social venture, so external financing is vital to make it a good business proposition.

Ngarambe has been an early success. Further projects are now being planned in other parts of Tanzania, Senegal and Uganda, as well as in Asia.

# A road test for human rights criteria

ABB takes an active role in a number of international organizations to drive greater awareness of business responsibilities in society.

The agendas and aims of the organizations are varied (see pages 37–38). One of them is the Business Leaders Initiative on Human Rights (BLIHR), a three-year program to help lead and develop practical ways for companies to protect and promote human rights.

ABB was a founding member of BLIHR, which now comprises ten international companies, believing that the provision of electricity is central to efforts to raise living standards around the world and contributes to ensuring key human rights.

Electricity provides a safe and clean source of heat, light, power and refrigeration which play an important role in the fulfillment of key economic, social and cultural rights, such as the right to housing, the right to education, the right to health and the right to food.

In 2004, ABB agreed – on behalf of BLIHR – to road test the United Nations human rights rules for business, known as the UN Norms, by developing a human rights checklist for use by managers of infrastructure projects. ABB based the checklist on the premise that managing engineering work and assessing its impact should be subject to human rights criteria.

Working with wide risk assessment criteria is not new, but a systematic approach incorporating human rights concerns contributes to sounder decisions.

The checklist mirrors the human rights categories listed in the UN Norms – the rights of workers, occupational health and safety, non-discriminatory treatment and the rights of local communities.

Translated into local languages, it was road tested in ABB's Access to Electricity rural electrification project

in Tanzania (see facing page). First reactions have been positive.

A human rights-aware approach benefits all stakeholders – the villagers, local authorities, suppliers and the companies and organizations. For ABB, the approach means lowering business risk by taking a wider view on the potential impact of such projects.

The use of the checklist is being extended to ABB projects in other parts of sub-Saharan Africa.

ABB has already received feedback from a number of organizations, including Amnesty International, on issues raised by the checklist. Areas for further consideration include the need to strengthen certain questions and the possibility of expanding the checklist to cover the UN Norms more fully.

It is still too early to draw detailed conclusions from the initial results. They will be evaluated in 2005 to assess the level of acceptance, major areas of concern and how to monitor the performance of organizations in meeting the criteria.

# Stakeholder dialogues

## Learning how to become a better corporate citizen

### **Stakeholder dialogues tackle a wide range of issues and are of considerable benefit to ABB.**

ABB's social policy commits the company to contribute within the scope of its capabilities to improving economic, environmental and social conditions through open dialogue with stakeholders and through active participation in common efforts.

Stakeholder dialogue takes place at two levels – at corporate level, normally twice a year, and at country level at least once a year in each country where ABB has operations. In 2004, they were conducted twice at corporate level and in 15 of the 48 countries and regions where we have sustainability controllers.

The corporate-level dialogues are led by executive committee members and involve about ten top-level external stakeholders, selected from representative groups which have expert knowledge of the topics under discussion.

The first corporate-level meeting in 2004 sought guidance on ABB's efforts to integrate sustainability and human rights into company performance.

Ways in which sustainability can be a driver for innovation were also discussed. The result: technology liaison managers have been appointed in the core Power Technologies and Automation Technologies divisions to further integrate sustainability performance into product development and project management.

The issue of improving promotion opportunities for women at all levels in a male-dominated electro-engineering company was also discussed. ABB has set up a task force to make progress in this area.

The second corporate-level meeting focused on one key issue – whether ABB should aim to become a CO<sub>2</sub>-neutral organization. Although ABB emits only a relatively small amount of CO<sub>2</sub> from its own facilities, the meeting urged ABB to rise to the challenge.

Agreed next steps include the preparation of a business plan demonstrating the aims, methods and benefits of CO<sub>2</sub> neutrality as a platform for further business growth. (See pages 2–3 for more about ABB's efforts to reduce CO<sub>2</sub> emissions).

At the country level, stakeholder dialogues are led by ABB's country managers and focus on issues relevant to ABB's operations in each country and on the concerns of local communities.

In the U.K., for example, stakeholders discussed a number of priority issues for ABB and stressed the importance of defining the business case behind sustainability activities and providing follow-up support for equipment supplied under the Access to Electricity rural electrification project in Tanzania.

They also underlined the need to promote energy efficiency through ABB's leadership in variable speed drives, develop a strong health and safety culture, and free up full potential from the diversity of talent within ABB.

At a stakeholder dialogue in the United States, customers, suppliers, NGOs and academics exchanged views on a series of issues: ways to improve occupational health and safety, strengthen community involvement, and develop a sustainability plan specific to the U.S.

In Canada, discussions focused on the partnership between ABB and United Way – a community-based organization selected by ABB employees as a partner for serving the needs of local communities across the country.

The program of organized dialogues with stakeholders over the past four years has brought considerable benefits. ABB gains valuable expert advice on dealing with current and future sustainability challenges and responds with actions which are more in tune with the expectations of the societies in which it operates.

# Outlook

## **ABB has set a number of priorities in the field of sustainability and corporate social responsibility (CSR) for the coming years.**

### **Corporate**

Sustainability, as described in this review, will be further integrated into ABB's business principles, objectives and day-to-day business operations.

We aim to ensure that the highest standards of corporate social responsibility, including health and safety, are mainstreamed into the working culture of all ABB employees.

Moral accountability is as important as legal accountability in our business activities. Association and involvement in the supply of a product or project counts as much as ownership. We intend to ensure that wider and deeper project assessments and risk reviews are fully implemented.

Carbon emissions will have a growing impact on the bottom line of all companies and organizations, creating new types of customer relationships and increasing opportunities for suppliers of energy-efficient products and systems like ABB. Carbon dioxide (CO<sub>2</sub>) will have a financial value, providing a stimulus for emission-reduction solutions.

Ongoing dialogues with stakeholders will help us to further sharpen our definition of CSR and improve our performance. They will also help us to make sound decisions to address specific issues, such as the viability of becoming a CO<sub>2</sub>-neutral organization.

### **Economic dimension**

Our priority is to ensure ABB's profitable growth and meet 2005 group targets.

### **Environmental dimension**

ABB's environmental performance is already of a consistently high standard, and we are now seeking ways to reach a higher level.

We plan to achieve this by conducting an environmental management review throughout the ABB Group and by building teams to identify new performance challenges and define strategies. Among the issues are CO<sub>2</sub> neutrality and the target of no waste.

We are addressing the climate change challenge by continuing to provide low-carbon technologies and

innovative solutions to reduce our own and our customers' CO<sub>2</sub> emissions.

We will continue to help our businesses and customers manage the challenge of increasing restrictions on the use of toxic and hazardous materials.

We aim to drive environmental management systems, promoting continuous improvement projects. We will further encourage all sites to integrate their management systems to cover environmental, quality and occupational health and safety matters.

### **Social dimension**

The improvement of our health and safety performance will continue to be our first priority, and we want to reduce our accident rates. We have been focusing on consolidating safety systems and processes at work, and in coming years we will concentrate more on safety behavior and culture.

Building on our work with the Business Leaders Initiative on Human Rights (BLIHR), we are confident we will be able to more effectively integrate these issues into our global business activities and avoid being complicit in human rights abuses.

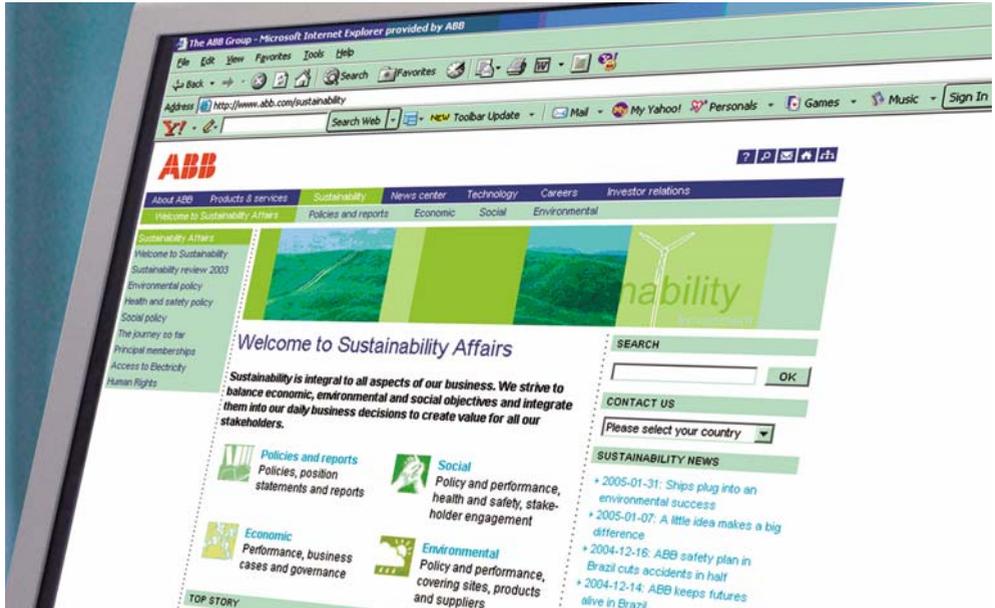
We will increase efforts to improve our gender balance within the group in order to realize the full potential of our cultural diversity, benefiting the company and employees.

Supply chain issues are a major challenge for all global companies, and we will ensure that our policies and systems function effectively.

### **Common efforts**

The Access to Electricity projects in Africa will continue to be a focus. To stimulate development in poor communities in other parts of the world, ABB will continue to test more business models suited to rural electrification projects.

ABB will continue to participate in selected international initiatives that offer effective ways for business to work with other partners to promote sustainability. To this end, we will continue to focus on organizations active in this field such as the UN Global Compact, World Business Council for Sustainable Development, BLIHR, CSR Europe, GRI and World Wide Fund for Nature.



If you want to know more about our activities, news and achievements, visit our sustainability Web site: [www.abb.com/sustainability](http://www.abb.com/sustainability) You can also download copies of our complete sustainability reports, reviews and summaries, and environmental product declarations.

You can also find more details about ABB's involvement in sustainability initiatives and associations.



**ABB Ltd**  
**Sustainability Affairs**  
P.O. Box 8131  
CH-8050 Zurich  
Switzerland  
Tel: +41 (0) 43 317 6584  
Fax: +41 (0) 43 317 6586

**ABB Ltd**  
**Corporate Communications**  
P.O. Box 8131  
CH-8050 Zurich  
Switzerland  
Tel: +41 (0) 43 317 7111  
Fax: +41 (0) 43 317 7958