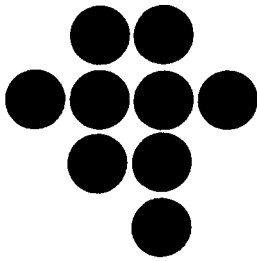


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"Communications and the New Europe"

October 25, 1990

Seminar Notes



**MASSACHUSETTS INSTITUTE OF TECHNOLOGY
COMMUNICATIONS FORUM**

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**Dr. Lee McKnight, M.I.T., Organizer
R. Michael Tyler, Booz, Allen & Hamilton
Klaus Grewlich, Deutsche Bundespost-Telekom
Elizabeth H. Prodromou, M.I.T., Rapporteur**

This session of the MIT Communications Forum brought together two speakers for a discussion of communications issues and the "New Europe. Dr. Lee McKnight of MIT introduced the speakers and the subject matter under consideration. He remarked that the unification of Germany, the Europe 1992 program, and the continuing upheaval in Central and Eastern Europe and the Society Union have raised communications issues to the top of the European agenda. Such questions are related to the social and cultural impact of communication technologies and changing political and social institutions; to competition in the communication and information industries; and to telecommunications infrastructure development and standardization. The speakers were asked to address some of these issues.

The first speaker was Klaus Grewlich, Director General of External Relations for Deutsche Bundespost-Telekom, in the Federal Republic of Germany. By way of introductory remarks, Grewlich noted that Deutsche Telekom (DT) is only ten months old. He commented that, just twenty-two days ago, one of the biggest mergers ever undertaken was kicked off with the merger of the telecommunications operations of the former GDR (East Germany) with those of DT. He also noted that he has been at his current position for only four months, and has been extremely occupied with trying to get the proper personnel for the right positions and with the issue of how to move into new markets.

Grewlich explained that DT is not like AT&T and British Telecom, for example, both of whom are very active in the world market. DT is still in the early phases of global market expansion. To this end, DT is currently setting up new affiliate offices in New York, Japan, the U.K., Paris, and Brussels. Initially, these offices will observe and report on market conditions and trends in these locations, and then operations will be expanded in these markets.

Grewlich set out three questions which he considers relevant to the broad issues under consideration in today's seminar. These questions were: (1) competition: to what extent is DT, a monopoly in some respects, able to compete, and to what extent is competition possible in today's Republic of Germany; (2) globalization: who is able to build global networks and how will they do it; he noted that INFONET is an interesting step; for example, would DT be a good partner for informatics companies who have experience in the field of networks, as a means of serving MNC's; (3) events in Europe and the Soviet Union: given DT's geographic location, the company is expected to be very knowledgeable about those events.

Turning to each of these issues, Grewlich offered some brief remarks. He began by explaining the basics of the restructuring which gave birth to DT. He noted that the communications reform

in the Republic of Germany does not go as far as the legislation which led to the divestiture of AT&T, nor does it go as far as the British and Japanese models. DT is still a public enterprise owned by the government, although Grewlich noted that already there have been calls by some circles to change DT's current status. Some people have argued that, rather than increase taxes to pay for the huge restructuring costs related to the eastern part of Germany, it might be wiser to sell some of the public enterprises or at least parts of them in order to raise revenues for restructuring. However, Grewlich said that the official line of thinking does not reflect this view, as of yet.

Grewlich commented that DT's Chairman must act as though it's going to lose its monopoly in public switch voice. But all else is freely competitive. Grewlich remarked that, in any case, the government is DT's regulator, a sort of FCC as it were. The government has direct influence over where DT performs its public tasks and social responsibilities. They regulate DT and DT's competitors.

DT has a two-tiered management system of management and supervisory boards, according to Grewlich. He noted that, at his level, most of his colleagues come from the private sector, from business. Grewlich noted that this is quite unusual by German standards, since it's rare for professionals to make the switch from government to business or to academia, as is often done in the United States. He views the presence of so many people from industry at the strategic and senior management levels of DT as a positive factor, and as one which will help DT to bring about a change in its corporate culture.

Grewlich went on to talk about DT's current operations now that the merger with the East German telecommunications operations is underway. Internationally, he noted that the company is responsible for maintaining the relationships which have already been established. In terms of the European market, Grewlich noted that DT is involved in a variety of pursuits. He also commented that the operators are somewhat hesitant in some respects, but that despite its reluctance to be told what to do by the Commission, DT sees the RACE program as positive in that it has established an important frame of reference for telecommunications discussions. Finally, Grewlich discussed the competitive threat to DT. He noted that this is also a result of the new, open ethos of the Community, so that it's really not a threat in the negative sense of the word. For example, Grewlich mentioned that there are trains which have fiber optics network technology which can be used to do certain things that DT would like to do. This presents DT with a real competitive challenge, particularly since these trains are established operators with an existing European network.

According to Grewlich, the play between competition and

cooperation will be the thing to watch in the future development of telecommunications services in Europe. Grewlich noted that DT and its competitors share an interest in becoming hubs for Europe. So, although there already exist a number of monopolies, there also exists competition: these monopolies are competing to become European telecommunications centers. In Grewlich's view, this competition is a positive development.

He went on to mention other efforts in which DT is interested. He cited the European Paging Services and ISDN. Grewlich emphasized that these efforts need not exclude Atlantic or triangular efforts - he mentioned, for example, that the United States and Japan are participating in the European Telecommunications Institute and that the Pacific ISDN Council is working in a cooperative endeavor to manufacture neutral world standards as soon as possible.

Grewlich maintained that the world market is becoming the common market. The European example of pooling resources - ESPRIT, for example - where members trust each other for access to shared technology is a model for something that should happen on a wider scale. Grewlich's opinion was that this sort of effort would benefit manufacturers, operators, and users. He emphasized that the vital point was to establish a balance between cooperation and competition, by establishing the necessary trust regarding access to shared technology.

Grewlich then offered some remarks on the challenges facing DT in terms of the reconstruction effort in the eastern part of Germany. At present, DT's annual revenues stand at \$24 billion, investment at \$11 billion, and profits at \$1.6 billion. Grewlich said that this is the last year that DT can expect such a profit, given that tariffs and accounting practices will change and, most importantly, given the burden of reconstruction. Regarding the reconstruction and DT operations, Grewlich pointed out that in the competitive areas such as cellular services, data transmission, and value added services, DT is in a neck-to-neck race with consortia including U.S. companies.

He then turned to the issue of how to internationalize DT services in order to globalize the company's customer base. Grewlich reiterated that the opening of foreign offices is meant to allow DT to implement concepts such as one stop shopping. But he also noted that there have been certain delays thus far - for example, concerning setting up of international lines. Moreover, he remarked that the unification of Germany has made the German market a very attractive one for foreign companies.

Grewlich pointed out that DT needs to develop a concept, as far as participation is concerned, that would facilitate discussion and policy vis-a-vis globalization. He noted that DT's three priorities at this point are: (1) following the

company's MNC customers and ensuring that they receive the needed telecommunications equipment - he remarked that this, of course, requires a delicate balance between cooperation and competition; (2) investment in areas or niches where DT can get good returns. This means moving into areas of intelligence which are close to the network, and taking participations where it is possible for DT to acquire additional know-how; (3) Eastern Europe; there is a lot going on there, and U.S. companies have been especially active in Eastern Europe, in terms of setting up data networks, developing plans for the establishment of digital overlay networks, etc. He noted that DT would try to be active in this new market, but not alone; rather DT will try to work with consortia. Grewlich commented that, until now, informations and communications technologies clearly have been freedom technologies for Eastern Europe; however, it is also becoming increasingly clear that these technologies are prerequisites for a continuation of the democratization process and for ongoing economic development.

In terms of the eastern part of Germany, Grewlich pointed out that DT faces the dual task of digesting the merger at a corporate level and of rebuilding an entire part of the country. He emphasized that, at present, the eastern part of Germany is in a desparate situation regarding telecommunications services. For example, he said that only 11% of the population has telephone service. DT will have to start at ground zero regarding the reconstruction of eastern Germany. Grewlich said that DT will try to take some quick measures to facilitate getting the necessary number of lines across the country, by using certain techniques which have been successful in developing countries. He observed that, in the final analysis, the new network in the eastern part of the country will be one of the most modern networks in the world. DT plans to invest DM55 billion in the network, so that by 1997 the eastern network will match that of the western part of Germany in terms of quality and reliability.

Grewlich closed with a few remarks on the issue of social responsibility, privacy, and informations technology. He observed that the IT (informations technology) security networks remain an important issue. He broke down this larger issue into components. For example, there are those who are in the military and therefore don't want their messages intercepted. He noted that there area also those in the services industries who have other sorts of concerns. He noted that, increasingly, there are parts of business who want secure communications and questions. Finally, he mentioned that this issue also affects those who are concerned with the broad question of privacy and human rights, or civil liberties. Grewlich maintained that it is important to see IT security devices as part of the overall IT network, rather than to separate the two - without, however, overburdening either operator. He maintained that it is necessary to have a common evaluation procedure which will be wider than that envisioned by

the Orange Book, which only cover NATO equipment. He emphasized the need for broad criteria that can be applied to all relevant fields.

Grewlich ended with the observation that the biggest challenge confronting DT is that of corporate culture. He remarked that DT has a combined strategy: a top-down strategy, wherein the board and the operational levels will need to develop a broader understanding of the new, merged company and its changing attitudes toward new markets and customers; and a bottom-up approach.

The second speaker was **R. Michael Tyler**, Vice President at Booz, Allen & Hamilton. He opened with some comments on **Grewlich's** discussion, which he saw as emphasizing the fact that this is an astonishing time of change for Europe in general, as well as a challenging period of change for the telecommunications field in Europe in particular. Moreover, he noted, Germany is a fascinating case in which those two phenomena can be observed simultaneously: changes in telecommunications services are being played out at the same time as the enormous tasks associated with unification are underway.

Notwithstanding these developments, **Tyler** noted that he planned to address his remarks to a more specific, albeit related, perspective. He proposed to organize his remarks around the evolution of satellite communications in Europe which, he observed, is actually a small part of the picture in terms of quantity but represents a case which illustrates many of the issues already mentioned in **Grewlich's** remarks.

Tyler commented that the European Commission has concluded a Green Paper on satellite communications. Although the document has not been officially circulated, **Tyler** remarked that its contents are known.

Tyler began by summarizing the premise of his remarks as a common, albeit debatable assumption: that is, the idea that a single European market is desirable and beneficial to the goals of the majority of Europeans, in both an economic and a political sense. **Tyler** pointed out that one finds a variety of perspectives along the continuum of this assumption. For example, at one end lies Margaret Thatcher, who most people regard as averse to the ambitious federalism reflected in the 1992 plans, while at the other end lies Jacques Delors, regarded as a federalist par excellence.

According to **Tyler**, the essential philosophical and practical questions still being debated are that of how the single market should operate and how widely it should operate. These questions raise the issue not only of the European Community, but also consider the European Free Trade Association

(EFTA), and other customs unions arrangements. Tyler pointed out that the EFTA countries are currently attempting to form some type of association with the European Community, through the concept of the European Economic Space. Tyler also observed that these questions are relevant for Eastern Europe, particularly the special case of what was formerly East Germany, in terms of how these areas will be associated with the European market established by the Community.

Against that background, Tyler turned to the question of what it means to have a single market in the telecommunications area. He broke down this issue into several components. First, there is the question of the economical provision of telecommunications services across European borders. Tyler observed that one of the main engines of early U.S. economic growth was the legislation which facilitated interstate commerce and, in keeping with the principles underlying this legislation, Tyler emphasized that one of the important characteristics associated with the large economic space of the European market will be the need to provide economical long distance telephone service. He commented that, currently, cross-border telephone service is extremely expensive. Tyler remarked that this is an issue currently under discussion by telecommunications providers. Tyler then mentioned a second relevant consideration for the notion of a single European market in telecommunications services. He noted that it remains to be seen the extent to which user enterprises will be able to operate on a European-wide scale rather than simply as a collection of separate national interests. Tyler noted that the third point he wanted to mention was directly related to the second, namely, the cultural aspects underlying the scope of the single market. He noted that the telecommunications industry has a potential cultural effect on the possibilities for creating a single market, insofar as the extent to which non-business messages (for example, television entertainment and cultural programs) will flow across national boundaries and therefore facilitate the creation of a single, unified Europe.

After outlining these three points as central issues in building a single European market, Tyler turned to each point in a bit more detail. Regarding the first issue, Tyler observed that it is a very complex one. He pointed to the problem of settlement payments as illustrative of the complexities involved in the overall issue. He noted that a mechanism is being developed, through CPT and IPU bilateral arrangements, for settling payments between national carriers at a certain price per minute (known as the accounting rate). Tyler remarked that the accounting rate in the past did not necessarily bear any relation to the price charged to the end customer by individual carriers; rather, it depended on national price setting and other constraints. Tyler remarked that, in order to reduce prices, the national carriers have begun important discussions which are

currently underway. He pointed out that these discussions have yet to bear practical results, precisely because there is such a variety of complex considerations involved, ranging from the extent to which competition will be introduced into the provision of telecommunications services to national political considerations. The point to keep in mind, according to Tyler, is the way in which this example shows the intricacies involved in interactions between regulatory change and settlement payments.

Tyler noted that the second issue he had mentioned, namely, the ability of networks to operate cross-border or internationally, is also very complex. He observed that a great many players already are doing so, but that there have been significant obstacles in the process of globalizing telecommunications services in Europe. He mentioned, for example, provisioning delays, different pricing principles in different countries, and the difficulties in establishing end to end testing, among others. Tyler noted that there are two existing philosophies about what approach to take to resolve the problems associated with globalization of telecommunications services in the European market. On the one hand, there are those who say that the users should resolve the problems. The other argument is that established providers should resolve the problems. According to Tyler, there is still much debate within the telecommunications industry over which of these two approaches to adopt.

In terms of the third point mentioned by Tyler, he noted that there are barriers to the provision of non-business telecommunications services across national boundaries. However, Tyler remarked that, despite barriers such as language, there has been a dramatic growth in cross-border telecommunications services. Tyler commented on the fact that, since the introduction of DBS services, which mainly have been targetted at the United Kingdom, there has been a very rapid adoption of market services in DBS. Tyler commented that, in fact, this has been the fastest adoption of any communications equipment in any European market. He also opined that this trend will likely continue with a cross-border spillover into other boundaries. Tyler turned to make several concluding remarks concerning what public policy can do to help or to hinder the effective spread of telecommunications policy throughout Europe. In terms of the first two areas, the Green Paper proposes the abolition of all restrictive regulations and licensing for receiver-only terminals. He remarked that the position is different for two-way terminals, with the paper envisioning licensing but no regulatory safeguards except in those cases necessary for protection of privacy. In addition, Tyler noted that the Green Paper envisions the implementation of a European Community directive related to uniform introduction of VSAT terminals across all Community nations. Tyler emphasized the importance of

this directive because it would allow access to satellite space terminals. Moreover, he noted that, although there are existing provisions in INTELSAT and UTELSAT agreements on these issues, the current agreements are unlikely to withstand the EC competition rules. Tyler pointed out, then, that the Green Paper provisions are important insofar as they provide a framework for future debates. The provisions also mean that member states will have to share the responsibility for readjustments in line with the new provisions regarding space segments and VSAT.

Tyler emphasized that he is encouraged by what he sees as a move in the general direction of more competition. His opinion is that more competition can only be beneficial for the telecommunications industry in the European Community, since competition will stimulate both innovation and the economical provision of services.

Tyler qualified his remarks, however, by noting that the Commission's work does not always benefit telecommunications. There have been elements of interventionism in the Commission's policy. He pointed out the example of satellite communications, where the Commission has made a strong effort to impose uniform technical standards on DBS. Tyler also noted that there has not been widespread compliance with the Commission's efforts to impose MAC as the industry standard.

Tyler closed with the comment that the current reality is an environment in which the telecommunications industry in Europe will be market by increasing competition.

Question & Answer

The first question was addressed to Grewlich, and concerned the specifics of the changes confronting Deutsche Telekom in the immediate aftermath of the German unification.

Grewlich commented that DT's main concern in the immediate wake of the unification has been to ensure the provision of the sort of communications services needed by individual operating companies in both the eastern and western parts of Germany. He also noted that measures to this effect had been underway since the beginning of this year. Grewlich pointed out that the most important concern at the immediate level has been resolving organizational issues of personnel.

The next question concerned the future of private television in the European market. The questioner noted that the speakers had briefly touched on the private television issue in their comments on Sky Channel, and he asked for elaboration.

Grewlich remarked that private television services do exist in the western part of Germany. He said that, in terms of

eastern Germany, DT is working on providing the same services which are now available in western Germany. He noted that, at the initial stages, the official stations might have an advantage in providing these services. But he also noted that he expects this to change over time, as infrastructural development improves and as private players have easier access.

Tyler noted that, although he wasn't exactly certain about the situation of private terrestrial broadcasters in Germany, it is important to recognize that individual states (as opposed to the federal government) have responsibility for decisions related to the provision of television services. Therefore, the provision of public television in the new lender (states) in the eastern part of Germany will be left to the lender level to decide.

The next questioner asked about whether or not the government will try to foster independent channels.

Grewlich commented that this is not the relevant question at this point. He remarked that the reality is that there are private television channels at present, and that the real question is how fast market forces will drive the expansion of distribution of those channel.

Tyler noted that another related issue is the management of the radio spectrum. He remarked on the current debate in Europe over this issue, pointing out that there are two endpoints on the spectrum of debate. On argument favors conservative management of the radio spectrum, given what is termed an already overcrowded and complex market. The other argument maintains that competition is the best way to effective management of the European radio spectrum.

The next questioner asked whether the provision of Europe-wide standards will, in fact, facilitate the creation of a single market with barriers to keep out non-Europeans.

Grewlich answered that the European Commission does not directly deal with standards questions. Rather, the Commission deals with questions of procedures, and offers an indicative list of recommended priorities in standards. He mentioned the specific issue of manufacturer neutral standardization as it affects current efforts to obtain interconnectivity. He noted that this is not an abstract issue, but is one where there is a need for demonstrated, ready technology and set-up capabilities. He offered HDTV as an example. Grewlich also emphasized that the Community will not use the standards issue as a protectionist device.

The next questioner asked if Green Paper pronouncements automatically signify that the Community is establishing a standard.

Tyler said that this is not the case. Standards agreements must occur through the mutual approval of all participants.

The next questioner asked about the possible emergence in Europe, on the private sector side, of the U.S. model of advertising-supported consumer services. He also asked about new initiatives by the private sector toward liberalization in electronics traffic.

Grewlich responded that there have been indications of the adoption in Europe of the U.S. model of advertising-supported consumer services (access channels) as a means to offer cross-border communications services.