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COMMUNICATION FROM THE COMMISSION

Developing the trans-European transport network:

Innovative funding solutions
Interoperability of electronic toll collection systems

Proposal for a

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on the widespread introduction and interoperability of electronic road toll systems in the Community

(presented by the Commission)

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Without high-performance transport networks, economies cannot be competitive. The creation and smooth operation of the trans-European transport network, which became official Community policy 10 years ago, is a key condition for the success of the internal market and to ensure sustainable mobility in an enlarged EU. However, traffic on the network is continuing to grow apace but unevenly, while at the same time there is growing insistence on sustainable development and an imminent need to incorporate the networks of the future Member States. Moreover, transport infrastructure is still under-financed, for lack of adequate funds and the absence of a framework conducive to investment.

Accordingly, in its White Paper *European transport policy for 2010: time to decide*[1] the Commission already drew attention to the clear mismatch between the advertised objectives and the financial means available from the Union. The fact is that the budget the Member States put aside for developing such transport infrastructure and the funds made available by the EU are insufficient. It is no small paradox to note that the Treaty makes the Community responsible for producing guidelines for the development of the trans-European transport network without granting it the financial resources to execute that task.

There seems to be little possibility at present of seeing a significant short-term increase in the public funding allocated to these infrastructure projects, in view of the combined effects of the current economic slowdown and budgetary constraints. The Member States are setting themselves other priorities for using this public funding, even though people and businesses in the EU suffer every day the tangible consequences of increasingly pronounced modal imbalance and the failure to adapt the network to growing mobility. Use of public-private partnerships (PPPs) to supplement public financing may be envisaged for some types of project. However, there are still too many unknowns regarding the projects to be carried out – particularly railway and cross-border projects – and regarding transport policy choices. The private sector has insufficient confidence to commit to financing them. Moreover, PPPs almost always require major public financial support in the form of subsidies or guarantees.

There is no denying, however, that one of the keys to a successful enlargement will be the creation of a proper transport infrastructure network which supplies the links still missing between the Fifteen and with the new member countries and enables full benefit to be derived from the European single area. This will involve infrastructure being modernised or newly built not just in the future member countries, but also in the existing EU Member States, given that some projects have not yet been carried out, that new traffic flows will develop and that connections between the two zones are few and far between.

The question of how to fund this new infrastructure clearly appears to be one of the main issues in the context of enlargement.

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[1] COM(2001) 370, 12.9.2001.

In the meantime, we need to make sure that the collection of fees through the introduction of infrastructure charging does not compromise traffic fluidity. This means making sure that toll systems are interoperable.

This Communication examines the situation of infrastructure in the trans-European network and its financing and shows the need to implement, without delay, a set of complementary measures centring on a more effective use of the funding earmarked for trans-European infrastructure. These measures rest on **two major pillars**:

- **better coordination of public and private financing of the trans-European transport network,**
- **together with an effective European electronic toll service.**

These measures should help make the policy framework more stable in the long run and create stable conditions for financing major trans-European network projects. The presentation of a legislative instrument, through an amendment of Directive 1999/62/EC on the charging of heavy goods vehicles for the use of certain infrastructures (the "Eurovignette") by June 2003, following the Brussels European Council of 20 and 21 March 2003, will enable a Community approach to be taken to the question of infrastructure charging and will define the conditions for implementing the cross-financing evoked in the Transport White Paper. The "European electronic toll service" will offer travellers on the trans-European road networks a single subscription contract as a basis for providing new services.

PART I: MORE EFFECTIVE FINANCIAL AND MANAGEMENT INSTRUMENTS FOR DEVELOPING THE TRANS-EUROPEAN TRANSPORT NETWORK

Introduction

The Maastricht Treaty, which entered into force in 1993, made the Community responsible for a policy promoting the interconnection and interoperability of networks to enable Europe to derive full benefit from an area without frontiers. In this context, the Community was given the task of establishing a series of guidelines covering the objectives, priorities and broad lines of action envisaged in the sphere of trans-European networks.[2] This led *inter alia* to the adoption in 1996 of Decision 1692/96 on guidelines for the transport network.[3] The main objective of this policy was – and still is – to fill in the gaps in the major infrastructure networks, gaps which hamper the free movement of goods and persons (transport), electricity and gas (energy) and ideas (telecommunications). This Communication covers only the trans-European transport network (TEN-T), however, given the significant differences with the energy and telecommunications sectors.

The gaps in the networks are due primarily to the fact that, until recently, networks were planned on a national basis. They did not always take due account of the trans-European dimension. Today, this lack of a trans-European perspective has left its mark in the form of the persisting barriers to smooth operation of the internal market[4]. In this context, the White Paper[5] pointed to the delays in completing the projects planned for the trans-European transport network as one of the chief sources of inefficiency and congestion on the main corridors which comprise it. The fast-approaching enlargement, which will inevitably generate significant growth in traffic volume[6] on the road and rail infrastructure – some of which is obsolete or offers far less capacity than required – only adds to the need to fill in the missing links in this network. Ten years after the entry into force of the Maastricht Treaty and almost as long after the Essen Summit, the development of the trans-European transport network is stagnating. There are many reasons for this, mainly as a result of:

– the lack of political will on the part of the decision-makers in the Member States who have taken insufficient account of the trans-European dimension of the projects;

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2 Article 155.

3 European Parliament and Council Decision of 23 July 1996, OJ L 228, 9 September 1996.

4 The closure of the Mont Blanc tunnel following the accident on 24 March 1999 combined with the lack of suitable alternatives, particularly rail services, is symptomatic of this situation, which had an adverse impact on the economy of the Valle d'Aoste region, and of Italy as a whole, in terms of gross domestic product. The amount of the impact between 1999 and the beginning of 2002 is estimated in a range between 3000 and 3200 million €, due one third, to an increase in transport costs and for the remaining to a deficit of exports towards other countries of the Union (Source: Dipartimento per lo Sviluppo delle Economie Territoriali della Presidenza del Consiglio, 2003).

5 COM(2001) 370.

6 The White Paper forecasts growth of 24% in passenger traffic and 38% in freight traffic over the period 1998-2010 in the fifteen current European Union countries. If nothing is done to spread the demand more evenly, heavy goods traffic is expected to increase by around 50%. The increase in traffic could easily be twice as high in the new Member States and between them and the current Union countries, bearing in mind, in particular, the relocation of highly labour-intensive industries to these countries.

– the inadequacy of the financial resources dedicated to the trans-European network from public (national and Community) and private sector sources, since full use has not been made of public-private partnership option;

– the fragmentation of the entities responsible for the projects, leading to serious difficulties with the coordination of resources and the management of the projects;

This document sets out to take stock of the situation regarding transport infrastructure financing, explore ways of making that financing more effective, and relaunch the debate, among the parties concerned, about the means to be deployed in future to ensure the efficiency of the transport network on which the competitiveness of the enlarged EU will depend to a large extent over the next few decades.

1. FINANCING THE TRANS-EUROPEAN TRANSPORT NETWORK: DIAGNOSIS OF THE CURRENT SITUATION

Though the Community was given new powers over the planning of trans-European networks, these were not accompanied by a large enough financial package to build such networks. At the same time, beyond intentions, the Member States are running into problems as a result of budgetary constraints in financing the infrastructure identified in the European Parliament and Council Decision on guidelines for the development of the trans-European transport network, particularly the cross-border sections. A framework better adapted to these financing problems is needed to meet the challenges of building this infrastructure. The funds available – especially public funds (including Community funds) – are often poorly coordinated, making them less effective, while private investment remains highly selective and is far from sufficient to meet the funding requirements for building the network.

1.1. An under-funded network

The difficulty facing trans-European network projects is funding. The estimated cost of the trans-European transport network alone is around €350 billion for all the projects to be completed by 2010, plus over €100 billion more for projects involving the future Member States. Although the objectives set by the EU for development of the networks are, rightly, ambitious, the results are failing to live up to expectations, with spending on the priority transport projects by the end of 2001 still no more than 25% of the total estimated cost. Only three of the 14 priority projects endorsed by the Heads of State and Government in Essen in December 1994 have been completed[7] and some of the other 11 are still at the preliminary studies stage. The longest delays are on the cross-border sections of these projects, which are less profitable and have lower priority than the national sections. This is particularly true of the projects in the Alps and the Pyrenees.[8]

The Member States, which used to invest, on average, 1.5% of their GDP on building transport infrastructure in the 1980s, now invest less than 1%.[9] Consequently, the Member States put €15 to €20 billion a year into the various trans-European transport network projects. This funding is clearly inadequate to complete all the planned projects by 2010 and, strictly speaking, takes no account of the new needs which will emerge with enlargement. This lack of commitment to funding transport infrastructure could be regarded as surprising, considering the very sharp parallel increase observed in demand for mobility and the importance of transport to the functioning of the economy.

As well as funding from the Member States, the trans-European transport network also receives Community financing, as in addition to the part it plays in identifying the individual components of the trans-European network, the Community's mandate

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[7] The Øresund fixed link between Sweden and Denmark, Milan–Malpensa airport and the upgrading of the Cork–Dublin railway line.

[8] See report by the European Parliament's Committee on Budgets on the Commission proposal to amend the Regulation on the granting of financial aid in the field of TENs (rapporteur: Mr Turchi).

[9] All transport infrastructure combined.

also covers the financial aspects. Accordingly, a budget has been earmarked for the trans-European networks, backed up by Council Regulation (EC) No 2236/95 laying down general rules for the granting of Community financial aid in the field of trans-European networks, as amended by Regulation No 1655/99 of the European Parliament and of the Council (the "TEN Financial Regulation"), to support projects of common interest, studies and works. This co-financing mainly takes the form of direct grants, though the TEN Financial Regulation also allows guarantees for loans or subsidies of the interest on loans. Alongside this, the Community also helps finance these networks via the Structural Funds (Cohesion Fund and ERDF). In the case of links inside the future Member States, the Pre-Accession Structural Instrument is helping to develop the networks in these countries. The total Community contribution in the European Union (all instruments combined excluding European Investment Bank loans) for the entire period from 2000 to 2006 adds up to around €20 billion.[10] Clearly, the Community support therefore covers only a (very) small fraction of the funding requirements and is far from sufficient to make a contribution to developing the networks.

It is clear from these figures that the budget the Member States are allocating to investment in the trans-European network and the funds made available by the EU itself are insufficient. To put it plainly, at the current rate of investment it would take almost 20 years to implement the schemes scheduled for completion by 2010. The new priorities which have emerged since the trans-European networks policy was introduced include those relating to enlargement – which will entail the (re)construction or upgrading of networks not only in the new Member States but also in the current members of the European Union, plus interconnections between these two zones. Another new factor which must be highlighted is the need to contribute towards an effective shift to the most environmentally friendly modes of transport, as called for by the Göteborg European Council, by targeting investment on such modes. Added to this, there is the need to contribute towards building a knowledge-based society by adapting the transport networks to use new technologies, following the example set by the Galileo project.

The fact is that while demand for mobility is growing, the construction of new and, in particular, cross-border transport infrastructure seems to be at a standstill. This transport policy, with its ambitious objectives for building new infrastructure, still lacks adequate financial resources to turn them into reality. As clearly stated in the White Paper on transport policy, if this state of affairs were to persist, it could have far-reaching consequences for safety, the environment and the quality of life of local communities and for the competitiveness of the entire production system in the enlarged Europe of the future.

1.2. Public funds in need of better coordination

Apart from looking for new sources of funding, one of the most striking aspects raised by implementation of these major projects is, without doubt, the lack of coordination between the different sources of public funds. This coordination is a problem since it is necessary to establish a delicate balance between different

[10] The trans-European transport network budget for 2000-2006 totals no more than €4.17 billion, which is nowhere near the real needs.

priorities, which do not necessarily coincide, at regional, national and Community and level.

Taking the Community funding first, the Structural Funds (ERDF), the Cohesion Fund and PASI can make a significant contribution – often over 50% of the total cost – to projects, which gives the Community authorities considerable weight in the programme for implementing them , while complying with the subsidiarity principle. This situation is conducive to the development of the TENs but this possibility is limited principally to the "cohesion countries" and less-developed regions. Assistance from the trans-European transport network budget, on the other hand, is, in theory, intended to act as a catalyst for starting up such projects, by demonstrating their feasibility and economic and financial viability. It can also serve as a lever to mobilise other sources of funding, both public and private, and to provide easier access to loans. However, this option is rarely used. Given the complexity of the projects and their ever-increasing cost, the current rules on financial aid, limiting support to 10% of the total cost, do not provide sufficient incentives to start up some of these projects. Under these circumstances, it is becoming harder and harder for the trans-European transport network budget to perform these catalyst and leverage functions.

Secondly, experience also shows that, when applying for financial support, States prefer to spread Community resources among a host of projects instead of concentrating on a more limited number to enable the Community funding to act as a catalyst. This failure to choose targeted priorities is highly damaging to the general effectiveness of these funds.

This is why, in terms of managing the trans-European network budget, the Commission cannot accept a scattering of funds among many small-scale projects but wishes instead to focus on financing the priorities identified in the White Paper (bottlenecks, short sea shipping, improving links with the outlying regions).

In addition, unlike the Community support from the trans-European network budget or the Cohesion Fund, which takes the form of direct grants (donations in a way), the contribution from the European Investment Bank consists of loans at advantageous rates,[11] often guaranteed by the Member States. As a result, the European Investment Bank is one of the leading providers of funds for major trans-European infrastructure projects and its lending policy is guided by the Bank's own assessment criteria and operates under an independent management system. For example, the proportion of European Investment Bank loans allocated to rail (24% of all loans granted to transport between 1997 and 2001[12]) is far lower than the percentage of direct grants from the trans-European transport network budget allocated to railway infrastructure (approximately two-thirds in 2000). Consequently, road continues to take the lion's share (35% between 1997 and 2001) of the European Investment Bank loans.

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[11] The European Investment Bank can grant 20-year or longer term loans at advantageous rates based on its AAA rating.

[12] Part of this 24% is earmarked for purchases of transport equipment but also covers infrastructure not forming part of the TENs. This means that the share taken by TEN railway infrastructure is even smaller. In compensation, the European Investment Bank has a separate line for loans granted to major infrastructure (6% of the total) for all modes together, but of which rail takes a substantial share.

Finally, at national level, planning of trans-European transport infrastructure often involves a proliferation of uncoordinated projects[13] rather than a selection of consistent priorities responding to the growth in traffic flows within the EU and between the EU and its leading partners (and future members) outside.

The degree of commitment of the Member States to the development of the trans-European transport network also depends on certain factors, such as their geographical location, and in particular their degree of isolation from the centre of the EU. It also depends on their attachment to a traditional approach to infrastructure planning which tends to discourage innovative solutions, and relies almost exclusively on public funding.

1.3. Highly selective public investment

In view of the severe budgetary constraints on the Member States and of the no less severe need for new infrastructure – particularly with enlargement on the horizon – fully public funding of such infrastructure in the medium term appears increasingly Utopian. To rely *solely* on funding of this type would pose a risk of delays in completing these networks – with unacceptable consequences – as already pointed out in the White Paper.

1.4. Exclusively private funding

Experience shows that exclusively private funding of transport infrastructure is not the best option for bringing large-scale projects to fruition. One of the rare recent examples of any significance is the Channel tunnel which – leaving aside its undeniable technical success – is in financial terms no model for investors wishing to venture into building infrastructure of this type. Because of the nature of the constraints involved, investment in major transport infrastructure does not lend itself to funding by the private sector alone. Apart from the substantial sums involved, the operating risks plus those inherent in the construction phase, the payback period on the infrastructure, the uncertainty surrounding both the returns[14] and the long term all militate against fully private funding of such infrastructure. Consequently, the public authorities tend not to look for mixed (public-private) financing solutions. This traditional view therefore discourages private investors.

1.5. Joint public/private funding

Though budgetary constraints thus weigh very heavily on the capacity for public funding, there are nevertheless means of strengthening the leverage exerted by public money to attract private capital, such as the concession system,[15] which has proved its worth and is continuing to do so. Throughout the 19th century the granting of concessions fuelled the boom in the railways, a sure sign that, at the time, funding of railway infrastructure predominantly by private investors appeared sufficiently attractive and profitable. Nevertheless, in the vast majority of cases, infrastructure funding remained the prerogative of the authorities, with private investors responsible only for track-laying and infrastructure management. In more recent

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13 For which funding is not always provided.

14 Especially taking account of the running costs which are added to the construction costs.

15 Or other forms of public-private partnership based on the principle of the public and private sectors sharing both risks and profits.

times, motorway or airport concessions have become common practice in many countries, where they have proved their worth.[16] Starting in the 1950s, the motorway networks of France, Italy and Spain were built largely with the aid of concessions, allowing rapid development of this infrastructure without massive State debts.

Today public private partnerships (PPPs) are still a viable option for financing transport infrastructure in Europe, but they face major economic, legal and, in some cases, political obstacles. The Commission believes that good practice needs to be spread and that, in the medium term, the existing regulatory framework needs to be updated to make PPP schemes even more attractive, particularly for private investors. In a number of Member States, a start has already been made on such revision of the classic administrative law on concessions.

It is in this context that the Commission is going to produce a Green Paper on public-private partnerships and European public contracts law. The purpose of the Green Paper will be to launch a major public consultation regarding the rapid development of various forms of PPP and the legal regulation of public contracts through Community law. To produce an informed debate, the Green Paper will examine the current situation, identify points of legal uncertainty and suggest possible options for the future. This consultation will enable the Commission to assess whether the legal framework needs to be improved and/or supplemented in order to give economic operators better access to the various PPP operations undertaken in the European Union. In the context of trans-European transport networks, PPPs need to meet a series of basic conditions:

(1) the definition of the project in question must be clear;

(2) there needs to be a clear long-term political will, so as to avoid calling into question the initial decisions;

(3) the players involved must work to ensure a high-quality partnership;

(4) perfect transparency must exist concerning the costs, the terms of the concession and the operating conditions, and the project in general. In particular, guarantees must be given that the private sector will not be forced to bear a series of additional costs beyond the forecasts which it took into consideration when it was selected;

(5) financial guarantees must be clearly specified and there must be an established, stable legal environment;

(6) the project must be on an appropriate scale, from the economic point of view;

(7) the project must be capable of generating revenue within a reasonable timescale, including from ancillary activities;

(8) the project must provide for revenue-sharing beyond a jointly agreed minimum revenue guaranteed by the State (though without such revenue being comparable to disguised aid);

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16 Whether through the introduction of real or shadow tolls.

(9) the project must also provide for clear, detailed risk-sharing so that each partner remains in control of the risk it is best placed to bear.

In practice, however, these conditions are not always met. What these projects offer is a (low) financial return in the long term plus a sometimes high construction and operating (traffic) risk. The complexity of PPPs also produces the situation that the abovementioned criteria for achieving success are rarely met properly for the whole of a major trans-European transport network project. Nevertheless, it is feasible for the cross-border parts of a specific project and clearly defined sections of a trans-European transport network to meet these conditions and, no doubt, interest private capital.

Alongside this, other restrictions emerging in this process must not be underestimated:

(1) reticence on the part of some Member States to encourage PPPs;

(2) the increasingly protracted negotiations, another disincentive;

(3) the amount needed in order to take part in a tendering procedure, related to the size and complexity of the project;

(4) the desire for returns in the short term, whereas most of the projects are long-term to very long-term;

(5) the political context, which is often fluctuating, generates uncertainty which has an impact on the economics of the projects and made discourage private investors.

PPPs are an attractive instrument, and are proving very popular in many sectors, but their success depends on certain factors or conditions being present: small-scale projects, projects with easily calculable returns and risks, motorways, bridges or airports. They can also be useful whenever the input from the private sector provides a means of maximising the results and keeping closer control over costs than could be achieved by a similar project managed by the public sector. By contrast, this solution is rarely neutral in terms of costs, which in many cases end up to be higher than in the case of fully public financing, because of private investors' higher transaction costs[17] and capital costs. Clearly, then, use of PPPs cannot be held up as a "miracle" solution for a public sector facing budgetary constraints. On the contrary, experience shows that a poorly prepared PPP can generate fairly high costs for the public sector.

The technical characteristics, structural complexities and political uncertainties surrounding the conditions for operating trans-European railway network schemes make this type of project a difficult case which goes far beyond the examples of PPPs to date. However, a close watch will have to be kept on the attempt by the French and Spanish governments to award a concession for operation and construction by a private consortium of the Perpignan-Figueras international stretch of priority project No 3 (TGV Sud). Generally, the process of opening up the railway market to competition – already underway within the EU – will bring improvements

17 Relating particularly to the identification, sharing and cover of risk.

in railway companies' commercial services and make it even more attractive to invest in projects of this type.

1.6. The funding requires a more appropriate framework

Specifically, experience of funding projects through PPPs has been confined mainly to infrastructure costing far less than what is forecast for the major trans-European infrastructure projects on the drawing board today.[18] The greater the private-sector participation in these projects, the greater the need to put in place guarantee mechanisms; in particular, recent PPPs have included arrangements to provide financial compensation to the operator should actual traffic levels fall short of the forecasts, a solution which, in some cases, could prove particularly costly to the State. In this context, the diversity of the projects suggests it would be difficult to come up with a single model for PPPs and that a case-by-case approach is more appropriate. However, it is worth doing more to promote PPPs at trans-European level, targeted on specific projects or parts of projects[19] of a kind which could fit in with these constraints (roads, airports,[20] terminals and ports). New ideas, innovative clauses and something going beyond a traditionally "public" approach are necessary to encourage this trend at Community level.

Coordination between the various (public or private sector) parties involved in a project is one of the most influential aspects involved in the success of a project, in particular in the case of trans-frontier infrastructure. Establishing a structure to manage the project and with responsibility for its funding is a particularly complex problem.

The transport network is characterised by the wide range of projects which need to be implemented, their service life (sometimes spanning several centuries), the major risks entailed (financial, technical, environmental and political) and the resultant highly uncertain rate of return. Consequently, there is no single answer to the question of infrastructure funding. Solutions must be sought through a variety of instruments which it must be possible to use in combination and which need to be adapted to each category of project. In this context, the creation of - single - structures for the management of projects, capable of dealing with both the financial and administrative constraints, is a priority.

In a context marked by a shortage of resources, the objective is to create a more appropriate framework for funding major transport infrastructure, drawing principally on instruments which already exist but which need to be reinforced.

In the case of the PPP framework, for example, the Commission largely responded to this demand over four years ago when it published a communication on public-

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[18] For example, the international section of the Lyon–Turin project alone will cost over €6.5 billion and the Brenner section almost €5 billion.

[19] HSL Zuid is a prime example. The private sector is financing 20% of the project, corresponding to the superstructure, while the public funds are intended for construction of the infrastructure and cover all the associated risks.

[20] In Greece the new Athens Spata airport was built and co-financed by a consortium of private undertakings and banks and by the Structural Funds. To guarantee sufficient revenue, the concession contract stipulated that the existing airport was to be closed when the new one opened.

private partnerships for financing trans-European transport network projects[21] which clearly defined the conditions for forming PPPs for infrastructure projects. Regulation No 1655/99 provides for contributions to venture capital (maximum 1% of the trans-European transport network budget) under the aegis of the European Investment Bank to help set up public-private partnerships on trans-European network projects.

In practice, the Community has at its disposal four budget instruments actively funding major trans-European transport infrastructure: the ERDF, the Cohesion Fund, the Pre-Accession Structural Instrument (PASI)[22] and the budget line for trans-European networks, which provide funding in the form of grants. The Cohesion Fund Regulation already stipulates that *"the Commission shall support beneficiary Member States' efforts to maximise the leverage of Fund resources by encouraging greater use of private sources of funding"*. In fact, Community co-financing from the ERDF and the Cohesion Fund can be used to support projects following a PPP format.[23] This is made possible by the high rate of support available from these Funds. In this way, after fruitful discussions with the Commission, Greece took the decision to form PPPs for some of its road projects so that the money "saved" could be put towards rail projects.

Another important point to note is the considerable progress made, in recent years, with the economic and regulatory framework and financial instruments, making it easier, in theory, to put PPPs in place. Reference ought to be made here to the initiatives already taken by the Commission:

– In an interpretative Communication of 29 April 2000, the Commission clarified the position of Community law regarding concessions. Concessions are not currently covered by the Directives on public contracts (except for works concessions, the award of which is subject to certain provisions of Directive 93/37). In its interpretative Communication, the Commission clarified the principles deriving from the provisions of the EC Treaty regarding fundamental freedoms, and in particular the obligations of opening to competition and equal treatment. The Court of Justice has confirmed this interpretation, notably in its judgment in the Telaustria Case.[24]

– The Commission took the opportunity of the recasting of the Directives on public contracts[25] to introduce a new procedure for awarding contracts, known as "competitive dialogue". This procedure applies to complex contracts, especially where the awarding body is unable to determine which technical means might meet its requirements, or the legal and/or financial package of a project. The competitive dialogue procedure allows dialogues to be pursued with different candidates in parallel in the initial stage. Once the awarding body is able to identify the solution or solutions liable to meet its requirements, the dialogue ends. It is then followed by a phase of submission and evaluation of tenders.

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21 COM (97) 453: Communication from the Commission on public-private partnerships in trans-European transport network projects.

22 Commission staff are studying forms of PPP which could qualify for funds from the PASI. DG REGIO "Guidelines for successful public-private partnerships" (March 2003).

23 This should also be the case with the PASI.

24 Case 324/98, judgment of 7 December 2000.

25 COM(2000) 275 final.

– In July 2000, the Commission also adopted a proposal for a regulation amending the existing Regulation on State aid (Regulation No 1107/70) authorising certain State aid to help set up PPPs.

– The introduction of the single currency offers considerable advantages for funding cross-border projects, particularly by removing the exchange risk.

2. RESOLVING THE ISSUE

A fresh approach is needed to promote a new culture of transport infrastructure funding in Europe which complies with Article 155 of the Treaty establishing the European Community ("*the Community may support the financial efforts of the Member States and ... the Commission may, in close cooperation with the Member States, take any useful initiative to promote such (financial) coordination*") and to facilitate synergy between the public and private sectors.

Transport infrastructure plays an essential part in the proper functioning of the economy since it enables economic growth potential to be increased through economies of scale and network economies.[26] Certain avenues need to be explored to make the management of these limited resources more efficient and to locate possible new sources of funding. This presupposes, among other things, that **single** management instruments will be put in place for each project. The new approach proposed is therefore based on the following range of options:

1. **Greater synergy in public investment**: whatever the principal method of funding, whether it is public or private, the size, complexity and cross-border nature of the main trans-European transport network projects mean there is a need for **better definition of priorities and coordination of funding**.

2. **The introduction of legal and financial management structures modelled on a European company**: The introduction of structures specially created for each major project and benefiting from European company rules could provide the legal and financial transparency and coordination that are lacking in many financial packages for infrastructure projects.

3. **Active promotion of the involvement of private capital** requires innovative clauses and politically courageous action to overcome the conditions and restrictions set out in 1.5. The options tried out in practice include:

   (a) Concession schemes under which most of the risks are borne by the private investor on the basis of active demand management.

   (b) Various systems enabling private partners to be involved as early as the project design phase, e.g. the private initiative system or the organisation of opening to competition on the basis of general functional requirements (output specifications).

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[26] What a network gains through the addition of a new node in terms of traffic generated and the scope for new links. Missing links create special network effects (e.g. the high-speed line which bypasses Paris to the south). A network must attain a critical mass to survive in competition with rivals. It therefore needs strong and coordinated funding.

(c) The introduction of quality indicators and "progress clauses" enabling the private investor to realise profit on the initial investment throughout the lifetime of a project.

(d) The possibility of extending these methods to cover several interconnected projects (possibly beyond national frontiers).

It will need to be ensured that these solutions are compatible with the requirements of transparency and equal treatment. For example, experience shows that Member States often have difficulty reconciling private initiative with the obligations of transparency and equal treatment of all potential candidates. Some Member States even contend that where the initiative comes from the private sector there is no longer any need for an opening to competition, though this is of course contrary to the Treaty.

4. **The definition of a stable and predictable Community framework for charging** for infrastructure use. Such an approach would increase the efficiency of infrastructure use, thereby making infrastructure more profitable and attractive to investors. It would help to improve service quality by financing maintenance costs. Reflecting the generated costs of transport more accurately could in some well-defined cases enable investments to be recouped. The presentation of a legislative instrument, through an amendment of Directive 1999/62/EC on the charging of heavy goods vehicles for the use of certain infrastructures (the "Eurovignette") by June 2003, following the Brussels European Council of 20 and 21 March 2003, will enable a Community approach to be taken to the question of infrastructure charging and will define the conditions for implementing the cross-financing evoked in the Transport White Paper.

5. Lastly, consideration could also be given to **increasing specific funds and introducing Community loans or guarantees** for other loans which are specifically dedicated to targeted trans-European transport network projects.

3. TOWARDS BETTER COORDINATION AND SYNERGY BASED ON NEW STRUCTURES

3.1. Funds

In its resolution on the White Paper on the common transport policy[27], the European Parliament favours a coordinated approach by setting up "*within the Financial Perspective a new European transport fund as a financial instrument with a substantial budget allocation, which would be applied across all Member States and deal with all modes of transport"*. Apart from this proposal, the scope and precise content of which still have to be determined, the need for coordinated management of all public and private sector funds dedicated to the trans-European transport network remains a priority, since public funds – whether national or Community – do not appear to be used optimally. In the context of the trans-European transport network they are often scattered among a large number of projects with no real order of priority being observed. This scattering of resources sometimes has a negative effect on the development of the trans-European transport network, as witnessed by the delays in completing these projects.

[27] Resolution of 12 February 2003. Rapporteur Mr Juan de Dios Izquierdo Collado. Point 82.

The Commission's proposal to increase its maximum share of funding in trans-European transport network projects from 10% to 20% reflects its desire to focus on a limited number of priority projects with high trans-European added value. The emphasis thus placed on certain infrastructure, and its translation in a financial sense into Community public funding, would also send the markets a strong signal of public commitment to these projects and should thus make it possible to attract other resources to them.

3.2. Structures

Where the promotion and active coordination of trans-frontier trans-European network projects is concerned, the idea of creating a European structure to promote and act as a catalyst deserves consideration.

3.3. Setting up transnational legal entities to coordinate individual projects

While European Economic Interest Groups (EEIG) seem to be suitable for handling the initial project phases (studies), they often prove far less flexible during the actual works, on account of the fact that the EEIG partners are responsible without limitation, and not solely as regards their participation.

In view of the number of players involved in setting up a European project, and the financial resources and technical expertise needed, the funds allocated to the project need to be managed in a coordinated manner during the development phase and not just the initial phase. It is therefore essential to find a legal instrument which allows more effective coordination at transnational level.

The approval by the Council, on 8 October 2001, of the Statute for European companies already goes some way to providing part of the answer. When it becomes effective in 2004, the approval of such companies should make it much simpler to set up companies to manage cross-border projects and should produce substantial economies of scale. It is within this European company framework, and in accordance with Community law on public contracts, that consideration could be given to setting up project companies for every major cross-border trans-European transport network project, in line with the spirit, though not the structure, of the Galileo joint undertaking.

The introduction of a coherent legal structure is a key step towards increasing the prospects of success of cross-border projects, in particular to secure the necessary funding. A European company would have a key advantage in this respect since it will have a single legal personality enabling it to operate in several EU Member States. Eurotunnel has already indicated that this would be a benefit which would enable it, over time, to avoid the need to comply with both English and French law. In this respect, a European company will also have a psychological advantage: if, for instance, a French company is taken over by an Italian company, the resulting company will not be Italian but European.

European companies will be governed by Community legislation directly applicable in all Member States or, failing this, by the law of the place where the company is registered. It will be governed by Community legislation directly applicable in all Member States.

– In this context, the setting up of European companies to manage each major trans-European transport network project could prove a considerable advantage. The creation of a company to manage a trans-European transport network project would in particular enable companies with registered offices in more than one Member State to merge and operate throughout the European Union and especially in the two countries concerned by the project;

– From the financial point of view, the setting up of a company would enable the various players to have a clear picture of the economic and financial situation regarding the project, which is not easy if there are several companies operating under different laws;

– Having a single company would also reduce administrative and legal costs. Such savings are generally quite considerable in the case of a multinational group;

– With regard to the choice of tax regime, which is probably one of the most important aspects and which has not been satisfactorily dealt with up to now, in particular because it requires unanimity within the Council, European companies should be free to choose which law will apply once they have a subsidiary in a given country. In this way, European companies could make it more attractive for the private sector to participate in such projects[28]; in particular, if a European company is set up by merger, any value added that is still latent will not be immediately taxed, which will be an advantage compared with ordinary law;

– Better coordination should allow economies of scale and probably make it possible to lean more heavily on the financial markets to borrow capital. The existence of a single company is likely, for example, to make it easier to sign a global funding agreement for the project through competitive tendering;

– The existence of a single entity will make it easier to identify the roles and responsibilities of the various players and the risks to be shared between them, in particular those of the public sector and those of the private sector. First of all, it is essential to ensure that the tasks of this type of company are clearly defined. The main task of the company should be to complete the development of the cross-border project by bringing in public[29] and possibly private funds. To guarantee the transparent operation of such companies, it will be necessary to put a supervisory body in place to ensure that their decisions properly reflect the thinking of the public, national or Community authorities. This means that European companies, with their flexible arrangements, will be able to employ both a single-tier system (Chairman and Board of Directors) and a two-tier system (Executive Board and Supervisory Board).

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[28] Except as regards very specific adjustments to existing tax legislation, the tax regime issue for European companies is still unresolved, as it is for any company with places of business in several different countries. Initially it is planned to allow companies to choose their tax base as soon as they have at least one subsidiary in the country in which they wish to be taxed. The longer-term objective is to achieve a single consolidated tax base at EU level for company taxation.

[29] See, for instance, the Øresund consortium.

It should also be remembered that European companies provide for the broad involvement of their staff in operation and control functions, whether through social negotiations or the minimum requirements already laid down in the Regulation. These aspects are particularly important in the framework of railway infrastructure, an area in which employers and employees in most Member States remain attached to the public dimension of the undertaking.

3.4. The development of new Community funding instruments

Nearly ten years after the publication of the Commission's White Paper on Growth, Competitiveness and Employment, which proposed that Community loans be issued to fund trans-European networks, existing financial and budgetary instruments have been shown to be inadequate, as witnessed by the growing delay in the completion of the trans-European transport network programme, especially the priority projects. It will be recalled that the **European Council** (meeting in Brussels in December 1993) agreed that **"**Additional funding will be provided, as far as is necessary, to ensure that priority projects do not run into financial obstacles which would jeopardise their implementation. With this in mind, the European Council called upon the ECOFIN Council to study, together with the Commission and the EIB, procedures which would enable the Community to mobilise up to an additional ECU 8 billion per annum in loans for operators involved in setting up networks. The possibility thus provided should not run counter to the efforts undertaken by the Member States to reduce public debt, nor to the stability of financial markets".

The redirection and reprogramming of financial resources decided on by the Berlin European Council, the second review of the trans-European transport network master plans now under way (for all modes) and the definition of a trans-European network for rail freight open to competition are providing fresh momentum for trans-European transport network policy in an enlarged Europe. This will need to be at the heart of the next review of the Financial Perspective.

In this context, it is hard to see how the EU will be able to avoid a debate about a substantial increase in the Community funds given over to building the trans-European transport network. This in no way prejudges the work in progress on the new Financial Perspective, but illustrates the specific nature of the trans-European network, the completion schedule for which goes well beyond the traditional financial planning framework. A future increase in funds for completing the trans-European networks would make it possible to create major arteries linking the countries of the enlarged EU.

3.5. EU guarantees for the political risks of the trans-European transport network

Guarantees provide an essential service for loan activity since they cover the associated risk, even if they are as not as publicly visible as loans. It should be emphasised that the rules for monitoring public debt do not refer to guarantees given by States and regions. Sovereign guarantees may therefore ensure the flexibility need to cope with the current budgetary constraints.

Title XV of the Treaty[30] refers to the possibility of Community action in the form of a guarantee for trans-European transport network projects. This possibility, which is formulated very clearly, has been used only rarely up to now in the trans-European network Financial Regulation to provide, as a form of support, assistance with the cost of premiums on loan guarantees granted by financial institutions where:

- the project is considered cost-effective;

- the project is already benefiting from the mobilisation of public and private funding;

- the project is receiving Community funding;

- the project is partly funded from revenue derived from charging.

With these four conditions, it would be possible to consider using Community guarantees or a Community loan.[31]

For external actions, there is a Guarantee Fund[32] which receives payments from the Community budget to cover such operations. The Guarantee Fund under the Community budget also provides guarantees for European Investment Bank loans to third countries. At the moment, these guarantees cover only political risks, namely the risks associated with the non-transfer of foreign currencies, expropriation, armed conflict and civil unrest, and commercial risks. However, the European Investment Bank has been asked by the Council to cover commercial risk through non-sovereign guarantees for 30% of its loans.

Given the options which exist at EU level, the political decision not to carry out a project could be interpreted as being a political risk due to environmental, budgetary, etc. causes. This interpretation could be extended to the non-completion of related network projects which are economically crucial for a project (network risk) but not for meeting the EU's formal commitments (to open up markets). The EU could provide guarantees for projects jointly with the Member States involved and the European Investment Bank. The main function of these guarantees is demonstrate the EU's interest and confidence in a particular project. They would be joint guarantees and the biggest backers would be the Member States benefiting from the project. The EIB's involvement would lend technical credibility to these guarantees since it would be responsible for assessing the project's vulnerability to the risks covered. In particular if a member State does not fullfil its commitments in terms of transport infrastructure implementation, or if it changes its priorities, without previously consulting other member States or interested parties. For instance, this consists in assessing what would be the economic damage to the Lyon-Turin project of a new

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30 There are also other references to guarantees in the Treaty. Article 103(1) stipulates that "A Member State shall not be liable for or assume the commitments ... of another Member State, without prejudice to mutual financial guarantees for the joint execution of a specific project". The European Investment Bank may also provide guarantees, under Article 267, though it very rarely makes use of this option.

31 The same concern led to the creation of the European Investment Fund (EIF) in 1994. In 2000, responsibility and expertise in this area were taken over by the European Investment Bank.

32 Article 3 of Regulation 2728/94: "The Fund shall rise to an appropriate level, hereinafter referred to as 'the target amount'. The target amount shall be 10% of the Community's total outstanding capital liabilities". Article 4(1): "The payments provided for under the first indent of Article 2 shall be equivalent to 14% of the capital value of the operations until the Fund reaches the target amount".

road development in the Alps (doubling the Fréjus road tunnel, Mercantour tunnel). To cover these guarantees, a fund to mutualise risk between the various trans-European transport network projects could be set up. As with all insurance systems, it would be a question of mutualising the risks of a maximum number of projects.

A reserve fund, adopting a form to be agreed with the EIB could be set up, based on premiums paid by participating enterprises and the public authorities concerned, including the EU.

The allocation of the reserve would be commensurate with the probability of materialisation of the limited risks run. The contributions from the Community budget to the reserve would come from the TEN budget line with the need for an amendment to the current Regulation, or possibly from contributions from the Structural Funds and the Cohesion Fund. The practical implications of such an approach should be examined in the context of the work on the new Financial Perspective.

CONCLUSIONS

Financing of the trans-European transport network in an enlarged European Union will in future make it necessary to:

– use innovative means to promote the involvement of private capital so as to overcome the conditions currently preventing the general use of public-private partnerships;

– ensure coherence and complementarity between the management structures for these types of project, in particular by setting up new transnational entities such as "European companies";

– review the level of Community resources in the context of the ongoing debate about the future Financial Perspective.

PART II – TOWARDS A EUROPEAN ELECTRONIC TOLL SERVICE

EXPLANATORY MEMORANDUM

1. INTRODUCTION

Electronic road toll systems first appeared in Europe in the early 1990s on motorways operated under a concession where the toll served to finance motorway construction and maintenance. The main objective of such systems is to speed up toll collection, thereby increasing the capacity of the motorway. Various systems were introduced, at local and then at national level, but these systems are mutually incompatible. This has created problems for motorists, who have to affix several tags to the windscreen of their vehicle (sometimes even within a single conurbation) in order to subscribe to the various systems. Italy, Portugal, France, Switzerland, Slovenia and Norway have national systems, but they are incompatible. In view of the growth in international traffic, it is now desirable for these systems to be interoperable at European level.

Moreover, particularly at peak periods, but also more persistently at certain very busy points in the European road network, **the collection of tolls causes congestion, delays, accidents and incidents** which are detrimental both to road users and to the environment. Electronic tolls put the users and their vehicles at the centre of the transport system. They are an excellent tool for reducing congestion, provided that a sufficient number of equipped lanes are available at toll stations and that a high proportion of road users take out a subscription (and therefore that a large number of vehicles are fitted with the equipment). They allow subscribers to be separated from occasional users as they arrive at or approach the toll stations. The subscribers can then enter dedicated lanes where they will not have to stop or perform any transactions but simply continue to drive at a slow speed. This is the case even if the lane is equipped with automatic barriers, as the dimensions have been designed for this purpose. While the maximum flow for a lane equipped with a credit card machine or a manual toll is 120 vehicles per hour, a lane with an electronic toll can handle between 200 and 300 vehicles per hour, depending on its configuration.

By eliminating these bottlenecks and making the traffic flow more smoothly, electronic tolls also help reduce the number of accidents and thus improve road safety. By limiting cash transactions at toll stations, they also reduce the risks associated with the transport of money.

Electronic tolls are the potential key to **developing the information society in road transport**, as the same equipment installed in vehicles will allow value-added telematic services and safety systems to be deployed for travellers: an automatic emergency call in the event of an accident, real-time information on traffic conditions or journey times etc. They therefore help to strengthen the European electronics industry, which is at the forefront of this technology and is calling for the implementation of technical standards in order to avoid market fragmentation. In addition, vehicle manufacturers will also be able to incorporate electronic toll equipment into their new vehicles.

2. UPDATE ON STANDARDISATION WORK

All existing electronic toll systems are based on **short-range microwave technology**, many variants of which are available on the market. The European Committee for Standardisation (CEN) worked on standards for several years, and in January 2003 it adopted a draft definitive standard. This draft nonetheless contains two variants.

In 1997 CEN adopted **pre-standards**, but these did not ensure compatibility between systems and left scope for varying interpretations. As a result, Europe now has the two variants referred to above. In addition to these pre-standards, there are also many older but widely deployed systems, some of which have a large number of subscribers.

A European directive is therefore needed to ensure migration towards the future interoperability of the various systems from the user's perspective, because the Member States will otherwise continue to adopt technically incompatible national electronic toll systems, thereby creating additional difficulties for international road traffic and hampering the smooth operation of the internal market. Without this directive, drivers will have to equip their vehicles with several country-specific boxes to ensure problem-free driving throughout the European road network.

This Directive is based on preparatory work carried out under the Research and Development Framework Programmes and in the context of the trans-European networks.

3. ACCESS TO TOLL SYSTEMS IN NEW MEMBER STATES, AND THE SITUATION FOR HEAVY GOODS VEHICLES

Electronic toll systems first appeared in just a few countries, but they are now spreading throughout Europe. A number of European countries have recently introduced, or are planning to introduce, electronic tolls as a tool of traffic regulation policy, either in urban areas (Netherlands, United Kingdom) or for certain categories of vehicles (heavy goods vehicles in Germany, Austria and Switzerland). Some of these countries are moving towards more recent technologies, such as satellite positioning (global navigation satellite system (GNSS): GPS, then Galileo) in conjunction with mobile communications (using the GSM/GPRS standard). This choice eliminates the need for costly investments in roadside equipment, and allows the most advanced technology to be used, but depends on further developments in satellite navigation systems, in particular Galileo. These countries are thereby opting for a reference technology in the future development of road transport. Without waiting for the operational implementation of Galileo in 2008, the EGNOS precursor system will, as of 2004, enable a higher degree of positioning accuracy than that given by GPS alone. Satellite positioning in conjunction with mobile communications is also the only solution that allows easy application of “zone tolls”, i.e. tolls applied to vehicles entering or leaving a given geographic area (e.g. a conurbation). However, other countries have taken a more conservative approach, depending on their road-charging policies and the topology of their network, and are continuing to opt for microwave technology.

There are no plans in the Member States to introduce new toll systems using any technology other than that based on microwaves or the GPS/GSM combination.

Thus electronic tolls in Europe will in future be based on the multiple use of three technologies, which could cause real difficulties for travellers. Take the situation of heavy goods vehicles (HGVs) for example. For some years HGVs have had to pay a tax in Switzerland, a country through which a high proportion of transalpine road traffic has to pass. To that end they have to install a complex device in the cab, which must be visible from the outside so that police and customs officers can see that it is working and being used correctly. The Swiss system combines the use of the DSRC microwave system and GPS. At the end of May 2002, Austria announced its decision to implement a different system, based solely on DSRC, to apply charges to HGVs. Germany announced a similar decision in June 2002, with the combined use of the three technologies. The situation will become even more complicated when other European countries such as the Netherlands and the United Kingdom introduce HGV charges, or countries like France allow HGVs to use their existing national electronic toll systems (Italy already allows this). Can it be acceptable that HGV drivers will eventually have to accommodate half a dozen electronic boxes (each measuring 1.5-2.5 dm^3 and weighing 1-2 kg) in their cab merely in order to pay toll fees? Such a situation would also be unacceptable on account of the price of the equipment. There is thus an urgent need for boxes capable of reading all the systems used in Europe to be made available to drivers who engage in international transport. The industry believes this can be done and that it will not involve any major increase in the price of the box. Indeed, some manufacturers believe the current price of €20 for a box capable of communicating with one single microwave system would increase to €25 for an interoperable box capable of reading all the microwave systems in use in the Union. The real increase in the price of boxes will be linked to the addition of the satellite/mobile communications system. However, the price of a box with satellite communication would not increase significantly through the addition of microwave-reading equipment.

Moreover, as the methods for operating these boxes are different, there is a growing risk that HGV drivers will make mistakes, whereby they may accidentally break the law (e.g. by incorrectly declaring the trailer or the number of axles), which will create difficult situations for users and infrastructure operators. Action therefore needs to be taken to harmonise and rationalise boxes.

4. AIM OF THE DIRECTIVE

This Directive was announced in the White Paper *European transport policy for 2010: time to decide*. It lays down the conditions necessary for a **European electronic toll service** to be put in place as soon as possible on all parts of the road network subject to tolls. This service will be based on the principle of "one contract per customer, one box per vehicle".

The Directive does not deal with road-charging policy as such and does not prejudge possible future road-charging policy options. On the contrary, the technical solutions adopted mean that all the policies currently planned at EU and Member State level can be implemented. And **by ensuring the interoperability of toll systems in the internal market, the Directive will facilitate the implementation of a Europe-wide infrastructure-charging policy**. The recommended technologies can cover all types of infrastructure (motorways, roads, bridges, tunnels, etc.) and vehicles (HGV, light vehicles, motorbikes, etc.).

5. ACHIEVING THAT AIM

Motorway operating companies have invested large sums of money (several hundred million euros per network) to install systems on their networks which were originally intended to provide a better service to the drivers of light vehicles. Account must be taken of these investments and their amortisation (in accounting and technical terms) so as to migrate progressively towards interoperable systems as part of the "European service". It will be possible for existing national and local systems to be maintained alongside the European service for local use until they are decommissioned, though the obligation for operators to make interoperable receivers available to users who want them will make an appreciable contribution towards easing this situation for users.

In this way progress can be made towards the interoperability of existing systems. However, some of the countries referred to above want to introduce an electronic toll system for HGVs in 2003 or 2004. Certain cities, such as Rome and London, have decided to install a toll system to control vehicle access to the city centre. Technical guidelines therefore need to be laid down now to ensure the interoperability of future systems. Moreover, the market is in favour of establishing a reference system for the future.

In response to these twin problems, the European electronic toll service will be based on a short-term solution (until 2005) taking account of existing systems, and then on a long-term solution (2008-2012), decided on and presented below.

The Commission is asking manufacturers to pursue action to lead as quickly as possible to the adoption of common standards for the three technologies.

6. COMBINING SATELLITE POSITIONING AND MOBILE COMMUNICATIONS WITH MICROWAVE TECHNOLOGIES IN THE SHORT AND MEDIUM TERM, BUT OPTING EXCLUSIVELY FOR THE MORE MODERN TECHNOLOGY IN THE LONG TERM

This combination, presented in Article 2, is intended to **allow charging on the road network without having to build new stations.** The widespread introduction of road-charging policies requires new technological solutions capable of covering all road infrastructure. Toll lanes cannot be built on all parts of the road network, including town centres, for financial, environmental and safety reasons.

This proposal is based on the use of new technologies that are already available: the GNSS/GSM combination, together with microwave technology, which is already in widespread use in the Union. These three technologies are the only ones currently being considered for new toll systems in Europe.

The use of satellite positioning and mobile communications technologies is advocated for the deployment of the European electronic toll service as well as for all new national systems, these technologies being more flexible and better suited to the new Community charging policies. Moreover, they are a component of many active safety systems, which manufacturers are starting to install in their vehicles. However, operators who want to use microwave technology for new systems will be allowed to do so until 2008.

This choice safeguards the continuity of investments which have already been made in several European countries, whilst taking into account the fact that the qualities of the new technologies will inevitably dominate in the near future, especially as they will open the door to the new value-added services aimed at travellers which were mentioned in the introduction. This choice also gives operators the freedom to choose the best solution for their specific problem, whilst ensuring the conditions necessary for the deployment of the European electronic toll service.

7. THE LONG-TERM TECHNICAL SOLUTION FOR DEPLOYING THE EUROPEAN SERVICE: IMPOSITION OF THE SATELLITE SOLUTION FROM 2008 FOR NEW SYSTEMS AND FROM 2012 GENERALLY

In 2008, microwave technology, a product of the 1970s, will be over 30 years old, and will have been left behind by new technological developments, even if it is still in use on the motorway networks. Satellite technology, on the other hand, boosted by the full implementation of Galileo in 2008, will have matured and had the time not only to prove itself but also to acquire the necessary experience to be able to support the European electronic toll service by itself. In particular, the difficult problem of fraud prevention, which is currently handled by means of complex short-range roadside-vehicle communication, should become easier to deal with thanks to the emergence of new technological solutions.

There is also a risk that between now and 2008 there may be further attempts to introduce new microwave systems, creating more problems of technical interoperability.

That is why the Directive stipulates that in 2008 the satellite solution involving the combination of satellite positioning and mobile communications must be adopted, in preference to microwave technology, for all new systems brought into service on or after that date as part of the European electronic toll service. To safeguard investments recently planned or made in certain countries, notably Austria, Spain, France, Greece, Portugal and Italy, microwave systems which are still in service may nonetheless continue to be used, though a migration strategy will have to be drawn up for 2010 in all the countries which continue to use them. Migration will have to be completed by 2012.

The Commission will have to produce a report by 31 December 2007 to assess whether the problems in evidence today regarding the utilisation of the satellite solution have been properly dealt with. If this report, drawn up in collaboration with the Electronic Toll Committee, shows that systems based on satellite and mobile communications technology have still not solved all the utilisation problems, the Commission will put forward a proposal to allow microwave systems to continue to be used alongside satellite/mobile communications systems.

It should be noted that adoption of the technical solution based on satellite technology and mobile communications technology will also mean the disappearance of toll barriers for the majority of users, who will be able to pay without stopping. A limited number of installations will remain for occasional users and those without the requisite equipment.

In this context, it is very important for manufacturers to ensure that the standardisation work in the European standardisation bodies is completed not just for microwave technology but also, and above all, for technologies based on satellite and mobile communications technology.

8. TIMETABLE FOR IMPLEMENTING THE EUROPEAN SERVICE

The technical and contractual arrangements for the full deployment of the European service on the technical bases described above will be examined by the Committee set up pursuant to Article 5.

The service will be deployed in two stages:

– from 2005 for electronic toll payments by HGVs, buses and coaches,

– from 2010 for cars.

By 2010, technological progress will have made it possible to install in all four-wheeled vehicles equipment communicating with the outside world via microwave, GSM/GPRS and GNSS interfaces supporting a range of telematic services, including electronic tolls. This technological leap, which has already started, will bring the cost of equipping a vehicle down to the current cost of a microwave tag (between 20 and 50 euros).

The European service will permit the full implementation of all HGV-charging and urban congestion-charging policies which the European Union or the Member States wish to introduce. In addition to being more appropriate for the "zone tolls" defined above, satellite positioning in conjunction with mobile communications avoids having to install equipment at a later date on road networks which were not built with space for toll plazas.

By 2010, interoperability between national electronic toll systems will have been achieved by the deployment of a "European service" offered to all types of customer.

9. IMPLEMENTATION OF THE EUROPEAN SERVICE: A REGULATORY COMMITTEE

The essential principles of the European service are described in Article 3. As the service will be offered by all toll infrastructure managers, it puts the traveller at the centre of the road transport system. Open to all and available throughout the road network by means of a single subscription contract, it will provide a single interface between the customer and infrastructure managers, in accordance with the basic principles of European legislation, particularly as regards the protection of privacy and personal data.

A precise definition is required of the details of the European service and of a large number of accompanying technical measures. For example, a memorandum of understanding needs to be established between European infrastructure managers for the deployment of the service and the establishment of a netting system.

The Commission is responsible for defining the "European service" and is taking the necessary technical decisions to this end, in accordance with the committee

procedure referred to in Article 5 of the Directive. Article 5 of the proposed Directive sets up a committee to assist the Commission, composed of representatives of the Member States with practical experience in the fields of electronic tolls and road management. Such a committee does not currently exist, and will therefore have to be set up. It will base its work on the findings of research projects conducted under the Research and Development Framework Programme and in the context of the trans-European networks. Preparatory work has already been carried out under the auspices of the Commission, involving national authorities, infrastructure managers and manufacturers.

The following issues *inter alia* will have to be addressed:

- precise definition of the service offered: in particular functional and technical specifications of the service, the quality of the service and its level of deployment at toll stations with a view to limiting queues, slow-moving traffic and incidents of all kinds resulting from toll collection. Payment methods relating to the subscription contract, and after-sales service, etc., will also be addressed;

- definition of the electronic toll applications: i.e. a single method of using the electronic toll equipment. For example, smart cards used as bank cards and smart cards used for health and health insurance purposes are technically compatible, but only the former enable you to withdraw bank notes from an automatic cash dispenser. The same type of problem arises here;

- launching and following up technical harmonisation activities with the European standardisation bodies;

- any technical additions to the standards or pre-standards used and which ensure interoperability; procedures for taking account of technological developments, in particular the development of mobile communications;

- harmonisation of electronic toll procedures between operators: vehicle classification, signs on toll gates, occasional users without the necessary equipment;

- specifications for incorporating equipment into vehicles;

- procedures for approving, at European level, on-board equipment, roadside equipment and the way equipment is incorporated into vehicles, particularly from the point of view of road safety;

- validation of the chosen technical solutions vis-à-vis the European rules protecting the freedoms and fundamental rights of individuals, including their privacy. In particular, conformity will have to be ensured with Directives 95/46/EC[33] and 2002/58/EC[34];

[33] Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data.

[34] Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications).

– procedures for dealing with operating anomalies (equipment breakdown, intentional or unintentional incorrect use, incidents, etc.), essentially in the international context where the customer is from a country other than the country of payment;

– definition of a memorandum of understanding between road operators enabling the service to be implemented on the European road network, and a single contract for customers. It should be possible to extend this memorandum of understanding at a later date to banks, whose payment cards will be associated with electronic toll systems.

The Commission and the committee will seek technical advice from groups of experts appointed for this purpose. In particular, the Commission will work with a group of experts made up of representatives of operators of the "European electronic toll service", the electronics and motor vehicle industries, and users of the service, professionals and individuals These groups of experts can be given the task of drafting the preparatory documents for the work of the committee. The Commission will also be able to seek the opinion of other committees or working parties, including the Working Party on the Protection of Individuals with regard to the Processing of Personal Data set up by Article 29 of Directive 95/46/EC.

2003/0081 (COD)

Proposal for a

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on the widespread introduction and interoperability of electronic road toll systems in the Community

(text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 71(1) thereof,

Having regard to the proposal from the Commission,[35]

Having regard to the opinion of the European Economic and Social Committee,[36]

Having regard to the opinion of the Committee of the Regions,[37]

Acting in accordance with the procedure laid down in Article 251 of the Treaty,

Whereas:

(1) By its resolution of 17 June 1997 on the development of telematics in road transport, in particular with respect to electronic fee collection (EFC),[38] the Council called on the Commission and Member States to develop a strategy for the convergence of EFC systems in order to achieve an appropriate level of interoperability at a European level, The communication to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions on interoperable electronic fee collection systems in Europe[39] presented the first stage of this strategy.

(2) The majority of European States which have installed electronic toll systems to finance road infrastructure costs or electronic systems to collect road use fees (jointly referred to hereinafter as "electronic toll systems") use short-range microwave technology and frequencies close to 5.8 GHz, but these systems are currently mutually incompatible. The work on microwave technology undertaken by the European Committee for Standardisation (CEN) resulted in January 2003 in the preparation of technical standards making for the compatibility of 5.8 GHz microwave electronic toll systems, following the adoption of pre-standards in 1997.[40] However, these technical

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35 OJ C […], […], p. […].
36 OJ C […], […], p. […].
37 OJ C […], […], p. […].
38 OJ C 194, 25.6.1997, p. 5.
39 COM (1998) 795 final.
40 The CEN pre-standards on 5.8 GHz short-range microwave transmission are known under the technical name of Dedicated Short-Range Communications (DSRC).

standards encompass two compatible variants which are not totally compatible. They are based on the Open Systems Interconnection (OSI)[41] model defined by the International Standardisation Organisation for communication between computer systems.

(3) Manufacturers and infrastructure managers have nonetheless agreed, within the Member States of the European Union, to develop interoperable products based on the pre-standards adopted in 1997, favouring the option of high-speed transmission between roadside units and on-board units. This choice should mean that new electronic toll systems can be introduced that will be technically compatible with the latest systems installed in the Community (in France, Spain and Austria).

(4) It is essential that this standardisation work be completed as quickly as possible to establish technical standards ensuring the compatibility of electronic toll systems based on microwave technology. Other standardisation work concerning a combination of satellite and mobile communications technology for electronic toll systems should also be completed rapidly in order to avoid further fragmentation of the market.

(5) It is necessary to provide for the widespread deployment of electronic toll systems in the Member States and neighbouring countries, and the need is arising to have interoperable systems suited to the future development of road-charging policy at Community level.

(6) Application of the new satellite positioning (GNSS) and mobile communications (GSM/GPRS) technologies to electronic toll systems will serve to meet the requirements of the new road-charging policies planned at Community and Member State level. These technologies enable the number of kilometres covered per category of road to be counted without requiring costly investment in infrastructure equipment or the construction of new toll stations. They also open the door to new safety and information services for travellers, such as the automatic alarm triggered by a vehicle involved in an accident and indicating its position, and real-time information on traffic conditions, traffic levels and journey times. With regard to satellite positioning, the Galileo project launched by the European Union in 2002 will, as of 2008, provide information of higher quality than that provided by the current GPS system and which is optimal for road telematic services. The EGNOS precursor system will already be operational in 2004 providing similar results. However, these innovative systems could raise problems concerning the reliability of checks and with regard to fraud prevention.

(7) The proliferation of technologies already in use or planned for electronic toll systems in the coming years (mainly 5.8 GHz microwave, satellite positioning and mobile communications) and the proliferation of specifications imposed by the Member States and neighbouring countries for their electronic toll systems may compromise both the smooth operation of the internal market and transport policy objectives. Such a situation is liable to lead in future to the proliferation of incompatible and expensive electronic boxes in the driving cabs of heavy goods vehicles, and to drivers making mistakes when using them or committing involuntary fraud.

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41 Reference to be added.

(8) Artificial barriers to the free movement of persons and goods between the Member States need to be removed, while still allowing the Member States and the Union to implement a variety of road-charging policies for all types of vehicles at local, national or international level. The equipment installed in vehicles must allow such road-charging policies to be implemented in accordance with the principles of non-discrimination between the citizens of all European Union countries. The interoperability of electronic toll systems at Community level therefore needs to be ensured as soon as possible.

(9) Drivers are legitimately concerned to see improved quality of service on the road infrastructure, particular in terms of safety, as well as a substantial reduction in the length of queues at toll stations, especially on busy days and at certain particularly congested points in the road network. The definition of the European electronic toll service needs to address that concern.

(10) Electronic toll systems contribute significantly to reducing the risk of accidents, and thus increasing traveller safety, at toll gates, to reducing the number of cash transactions and to reducing congestion at toll gates, especially at busy times. They also preclude the negative environmental impact of installing new toll gates or expanding existing toll stations.

(11) The introduction of electronic toll systems will entail the processing of personal data. Such processing needs to be carried out in accordance with European rules, as set out *inter alia* in Directive 95/46/EC and Directive 2002/58/EC. The right to protection of personal data is explicitly recognised by Article 8 of the Charter of Fundamental Rights of the European Union.

(12) Given that the objectives of the proposed action, including the **interoperability of toll systems in the internal market** and the introduction of a **European electronic toll service** covering the entire Community road network on which tolls are charged, cannot be achieved sufficiently by the Member States and may therefore be better achieved, by reason of their **European** dimension, at Community level, the Community may take measures, in accordance with the principle of subsidiarity established in Article 5 of the Treaty. This Directive does not go beyond what is necessary in order to achieve these objectives, and is therefore in accordance with the principle of proportionality as set out in the said Article.

(13) The measures necessary for the implementation of this Directive should be adopted in accordance with Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission,[42]

HAVE ADOPTED THIS DIRECTIVE:

Article 1
Objective and scope

This Directive prescribes the conditions necessary to ensure the widespread introduction and interoperability of electronic road toll systems in the Community. It applies to the electronic collection of all types of road fees, on all parts of the Community road network, urban and

[42] OJ L 184, 17.7.1999, p. 23.

interurban, motorways, major and minor roads, and various structures such as tunnels, bridges or ferries.

To achieve the objective set in the first paragraph, a European electronic toll service shall be created. This service must ensure the interoperability, for users, of the electronic toll systems that have already been introduced at national or regional level by the Member States and of those to be introduced in future throughout the Union's territory.

Article 2
Technological solutions

1. All new electronic toll systems brought into service on or after 1 January 2005 and intended for use by all categories of heavy goods vehicles and/or buses and coaches shall, for carrying out electronic toll transactions, use one or more of the following technologies:

(a) satellite positioning;

(b) mobile communications using the GSM-GPRS standard (reference GSM TS 03.60/23.060);

(c) 5.8 GHz microwave technology.

2. A European electronic toll service shall be set up pursuant to Article 3 on 1 January 2005. As of this date, operators must make available to interested users on-board equipment which is suitable for use with all electronic toll systems in service in the Union and in all types of vehicle, in accordance with the timetable set out in Article 3(3), and which is interoperable and capable of communicating with all the systems operating in the territory of the Union.

3. It shall also be possible to link this on-board equipment to the vehicle's electronic tachograph for the purposes of calculating the fees due.

4. As of 1 January 2008, all new systems brought into service as part of the European electronic toll service referred to in Article 3 shall use only the satellite positioning and mobile communications technologies referred to in Article 2(1).

5. Systems brought into service as part of the European electronic toll service before 1 January 2008 must have abandoned the 5.8 GHz technology by 1 January 2012. A migration strategy for such systems must be formulated and implemented between 1 January 2008 and 1 January 2012.

6. To satisfy itself that satellite and mobile communications technology meets the needs of the operators of electronic toll systems, the Commission shall, by 31 December 2007, present a report drawn up with the assistance of the Electronic Toll Committee and, if necessary, a proposal to extend the period of use of microwave systems.

7. Member States shall take the necessary measures to increase the use of electronic toll systems. They shall ensure *inter alia* that at least 50% of toll lanes in each toll station are equipped with electronic toll systems by 2005 at the latest.

8. Member States shall ensure that processing of personal data necessary for the operation of the European electronic toll service is carried out in accordance with the European rules protecting the freedoms and fundamental rights of individuals, including Directive 95/46/EC and Directive 2002/58/EC.

Article 3
Setting-up of a European electronic toll service

1. A "European electronic toll service" shall be set up which encompasses all road infrastructure in the Community on which tolls or usage fees are collected. A single subscription contract shall give access to the service on the whole of this network and subscriptions shall be available from the manager of any part of the network.

2. The European electronic toll service shall be independent of the level of charges and the purpose for which such charges are levied. It shall concern only the method of collecting tolls or fees. The service shall be the same irrespective of the place of registration of the vehicle, the nationality of the subscriber, the nationality of the operator who issued the subscription, and the zone or point on the road network in respect of which the toll is due.

3. All network managers concerned must offer the European service to their customers according to the following timetable:

(a) for all vehicles exceeding 3.5 tonnes and vehicles carrying more than nine passengers (driver + 8), as of 1 January 2005,

(b) for all other types of vehicle, as of 1 January 2010 at the latest.

Article 4
Features of the European electronic toll service

1. The European electronic toll service shall encompass the following:

(a) functional and technical specifications of the service, the quality of the service and its level of deployment at toll stations with a view to limiting queues, slow-moving traffic and incidents of all kinds resulting from toll collection;

(b) launching and following up technical harmonisation activities with the European standardisation bodies

(c) any technical additions to the standards or pre-standards used and which ensure interoperability; procedures for taking account of technological developments, in particular the development of mobile communications, with the aim of updating the list of technologies on which the European electronic toll service is based;

(d) specifications for integrating equipment into vehicles;

(e) procedures for approving, at European level, on-board equipment, roadside equipment and the way equipment is incorporated into vehicles, particularly from the point of view of road safety;

(f) classification of vehicles;

(g) transactional models;

(h) a memorandum of understanding between the managers of the road network concerned enabling the service to be implemented on the European road network, and a single contract for customers;

(i) handling of special cases, such as occasional users and any type of malfunction;

(j) validation of the chosen technical solutions vis-à-vis the European rules protecting the freedoms and fundamental rights of individuals, including their privacy. In particular, conformity will have to be ensured with Directive 1995/46/EC and Directive 2002/58/EC.

2. The European electronic toll system shall employ the technical solutions referred to in Article 2.

3. Technical decisions relating to the definition of the European electronic toll service shall be taken by the Commission in accordance with the procedure stipulated in Article 5(2).

4. The Commission shall, in accordance with the procedure laid down by Directive 98/34/EC, ask the European standardisation bodies, and in particular the European Committee for Standardisation, to make every necessary effort rapidly to adopt standards applicable to electronic toll systems, particularly with regard to microwave technology, and systems using satellite positioning and mobile communications technology.

5. Equipment for the European electronic toll service must comply in particular with the requirements of Directives 1999/5/EC (R&TTE) and 89/336/EC (EMC).

Article 5
Committee

The Commission shall be assisted by an Electronic Toll Committee composed of representatives of the Member States and chaired by the representative of the Commission.

Whenever reference is made to this paragraph, Articles 5 and 7 of Decision 1999/468/EC[43] shall apply, subject to the provisions of Article 8 thereof.

(The period provided for in Article 5(6) of Decision 1999/468/EC is hereby set at three months.)

The Committee shall adopt its rules of procedure.

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[43] OJ L 184, 17.7.1999, p. 23.

Article 6

Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive not later than 30 June 2004. They shall forthwith inform the Commission thereof.

When Member States adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.

Article 7

This Directive shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

Article 8

This Directive is addressed to the Member States.

Done at Brussels, […]

For the European Parliament	*For the Council*
The President	*The President*

LEGISLATIVE FINANCIAL STATEMENT

Policy area(s): Energy and Transport

Activit(y/ies): Sustainable mobility policy

TITLE OF ACTION: DIRECTIVE OF THE EUROPEAN PARLIAMENT AND THE COUNCIL ON THE WIDESPREAD INTRODUCTION AND INTEROPERABILITY OF ELECTRONIC ROAD TOLL SYSTEMS IN THE COMMUNITY

1. BUDGET LINE(S) + HEADING(S)

B2-7040 A: Sustainable mobility policy – Expenditure on administrative management (for 2003)

06 01 04 03 Sustainable mobility policy - Expenditure on administrative management (from 2004)

2. OVERALL FIGURES

2.1. Total allocation for action (Part B): € million for commitment: none

2.2. Period of application: yearly

Commencing in 2003 and ending in about 2009

2.3. Overall multiannual estimate of expenditure:

(a) Schedule of commitment appropriations/payment appropriations (financial intervention) *(see point 6.1.1)*

€ million (*to three decimal places)*

	Year 2003	2004	2005	2006	2007	2008 and subs. yrs	Total
Commitment appropriations (CA)							
Payment appropriations (PA)							

(b) Technical and administrative assistance and support expenditure *(see point 6.1.2)*

CA	0.150	0.150	0.150	0.150	0.100	0.200	0.900
PA	0.150	0.150	0.150	0.150	0.100	0.200	0.900

Subtotal a+b							
CA	0.150	0.150	0.150	0.150	0.100	0.200	0.900

PA	0.150	0.150	0.150	0.150	0.100	0.200	0.900

(c) Overall financial impact of human resources and other administrative expenditure *(see points 7.2 and 7.3)*

CA/PA	0.158	0.158	0.158	0.158	0.158	0.158	0.948

TOTAL a+b+c							
CA	0.308	0.308	0.308	0.308	0.258	0.358	1.848
PA	0.308	0.308	0.308	0.308	0.258	0.358	1.848

2.4. Compatibility with financial programming and financial perspective

XX Proposal compatible with existing financial programming.

This proposal will entail reprogramming of the relevant heading in the financial perspective.

This may require application of the provisions of the Interinstitutional Agreement.

2.5. Financial impact on revenue[44]

XX Proposal has no financial implications (involves technical aspects regarding implementation of a measure)

OR

Proposal has financial impact – the effect on revenue is as follows:

(NB All details and observations relating to the method of calculating the effect on revenue should be shown in a separate annex.)

(€ million to one decimal place)

		Prior to action	Situation following action					
Budget line	Revenue	[Year n-1]	[Year n]	[n+1]	[n+2]	[n+3]	[n+4]	[n+5]
	a) Revenue in absolute terms							
	b) Change in revenue	Δ						

(Please specify each budget line involved, adding the appropriate number of rows to the table if there is an effect on more than one budget line.)

3. BUDGET CHARACTERISTICS

[44] For further information, see separate explanatory note.

Type of expenditure		New	EFTA contribution	Contributions form applicant countries	Heading in financial perspective
NCE	NDA	NO	NO	NO	**No** [3…]

4. LEGAL BASIS

Article 71(1) of the Treaty

5. DESCRIPTION AND GROUNDS

5.1. Need for Community intervention[45]

5.1.1. Objectives pursued

For several years, the Commission has been encouraging the Member States to harmonise their projects in this field in order to avoid the creation of as many incompatible national systems as there are Member States, with each system requiring the installation of special electronic equipment in vehicles. Despite the many millions of euros invested in the research and development framework programmes and in the Euro-regional projects, this strategy has failed. Proof of this came in May 2002 when Germany and Austria simultaneously decided to adopt incompatible national systems.

The Directive creates the conditions necessary for implementing a European electronic toll service based on the principle of one single contract and one piece of on-board vehicle equipment giving access to the entire toll network in the Community.

The service is based on two technologies:

– the 5.8 GHz microwave systems used today on European toll motorways;

– satellite positioning in conjunction with mobile communications, an innovative solution based in the long run on Galileo, and the only one enabling the Commission and the Member States to implement the new road-charging policies they favour in order to manage demand more effectively, improve safety and help traffic flow more freely throughout the primary urban and interurban network. For the future, the Directive advocates the use of this second solution in preference to the first.

The Directive sets up an Electronic Toll Committee responsible, in consultation with the Member States, for handling all technical and contractual matters necessary for the implementation of the European service.

5.1.2. Measures taken in connection with ex ante evaluation

Not applicable

5.1.3. Measures taken following ex post evaluation

[45] For further information, see separate explanatory note.

Not applicable

5.2. Action envisaged and budget intervention arrangements

A precise definition is required of the details of the European service and of a large number of accompanying technical measures. For example, a memorandum of understanding needs to be established between European infrastructure managers for the deployment of the service and the establishment of a netting system.

To that end, Article 5 of the proposed Directive provides for a committee of representatives of the Member States with practical experience in the fields of electronic tolls and road management, whose technical skills can help the Commission decide on a properly informed basis. Such a committee does not currently exist, and will therefore have to be set up. It will base its work on the findings of research projects conducted under the Research and Development Framework Programme and in the context of the trans-European networks. Preparatory work has already been carried out under the auspices of the Commission, involving national authorities, infrastructure managers and equipment manufacturers.

The Commission will refer the matters listed below (and possibly other matters) to the Committee:

– Precise definition of the service offered: in particular functional and technical specifications of the service, the quality of the service and its level of deployment at toll stations with a view to limiting queues, slow-moving traffic and incidents of all kinds resulting from toll collection. Payment methods relating to the subscription contract, and after-sales service, etc., will also be addressed.

– Definition of the "electronic toll applications": i.e. a single method of using the electronic toll equipment. For example, smart cards used as bank cards and smart cards used for health and health insurance purposes are technically compatible, but only the former enable you to withdraw bank notes from an automatic cash dispenser. The same type of problem is involved here.

– Launching and following up technical harmonisation activities with the European standardisation bodies.

– Any technical additions to the standards or pre-standards used and which ensure interoperability; procedures for taking account of technological developments, in particular the development of mobile communications.

– Harmonisation of electronic toll procedures between operators: vehicle classification, signs on toll gates, occasional users without the necessary equipment.

– Specifications for incorporating equipment into vehicles.

– Procedures for approving, at European level, on-board equipment, roadside equipment and the way equipment is incorporated into vehicles, particularly from the point of view of road safety

– Validation of the chosen technical solutions vis-à-vis the European rules protecting the freedoms and fundamental rights of individuals, including their

privacy. In particular, conformity will have to be ensured with Directives 95/46/EC[46] and 2002/58/EC[47]

– Procedures for dealing with operating anomalies (equipment breakdown, intentional or unintentional incorrect use, incidents, etc.), essentially in the international situation where the customer is from a country other than the country of payment.

– Formulation of a memorandum of understanding between operators enabling the service to be implemented on the European road network, and a single contract for customers. It will have to be possible to extend this memorandum of understanding later to banks, whose payment cards will be associated with electronic toll systems.

The budget requested will cover all expenditure on studies needed to underpin the Committee's work.

5.3. Methods of implementation

This work will be carried out by groups of outside experts chosen jointly in collaboration with the Committee and paid by the Commission, which will be responsible for monitoring the groups. These experts will be selected by invitation to tender.

6. FINANCIAL IMPACT

6.1. Total financial impact on Part B - (over the entire programming period)

(The method of calculating the total amounts set out in the table below must be explained by the breakdown in Table 6.2.)

6.1.1. Financial intervention

Commitments (in € million to three decimal places)

Breakdown	[Year n]	[n+1]	[n+2]	[n+3]	[n+4]	[n+5 and subs. years]	Total
Action 1							
Action 2							
etc.							
TOTAL							

[46] Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data.

[47] Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications).

6.1.2. Technical and administrative assistance, support expenditure and IT expenditure (commitment appropriations)

	[Year n]	[n+1]	[n+2]	[n+3]	[n+4]	[n+5 and subs. years]	Total
1) Technical and administrative assistance							
a) Technical assistance offices							
b) Other technical and administrative assistance: - intra muros: - extra muros: *of which for construction and maintenance of computerised management systems*							
Subtotal 1							
2) Support expenditure							
a) Studies	0.150	0.150	0.150	0.100	0.200		
b) Meetings of experts							
c) Information and publications							
Subtotal 2							
TOTAL	0.150	0.150	0.150	0.100	0.200		

6.2. Calculation of costs by measure envisaged in Part B (over the entire programming period)[48]: None

(Where there is more than one action, give sufficient detail of the specific measures to be taken for each one to allow the volume and costs of the outputs to be estimated.)

Commitments (in € million to three decimal places)

Breakdown	Type of outputs (projects, files)	Number of outputs (total for years 1…n)	Average unit cost	Total cost (total for years 1…n)
	1	2	3	4=(2X3)

[48] For further information, see separate explanatory note.

Action 1 *- Measure 1* *- Measure 2* Action 2 *- Measure 1* *- Measure 2* *- Measure 3* *etc.* TOTAL COST

If necessary explain the method of calculation

7. IMPACT ON STAFF AND ADMINISTRATIVE EXPENDITURE

7.1. Impact on human resources

Types of post		Staff to be assigned to management of the action using existing and/or additional resources		Total	Description of tasks deriving from the action
		Number of permanent posts	Number of temporary posts		
Officials or temporary staff	A B C	1		1	*Management and secretariat of the Electronic Toll Committee, supervision of the work of the groups of experts used by the Committee, follow-up of the Committee's decisions and implementation of any resulting legislative action.*
Other human resources			Sub-groups of experts		
Total					

7.2. Overall financial impact of human resources

Type of human resources	Amount (€)	Method of calculation *
Officials Temporary staff	108 000	
Other human resources (specify budget line)		
Total	108 000	

The amounts are total expenditure for twelve months.

7.3. Other administrative expenditure deriving from the action

Budget line (number and heading)	Amount €	Method of calculation

Overall allocation (Title A7) A0701 – Missions A07030 – Meetings A07031 – Compulsory committees [1] A07032 – Non-compulsory committees [1] A07040 – Conferences A0705 – Studies and consultations Other expenditure (specify)	A07031: 50 000	4 meetings a year – reimbursement of travel expenses Regulatory Committee
Information systems (A-5001/A-4300)		
Other expenditure - Part A (specify)		
Total	50 000	

The amounts are total expenditure for twelve months.

[1] Specify the type of committee and the group to which it belongs.

I.	Annual total (7.2 + 7.3)	€158 000
II.	Duration of action	6 years
III.	Total cost of action (I x II)	€948 000

The needs in terms of human and administrative resources shall be covered within the allocation granted to the managing DG in the framework of the annual allocation procedure.

8. FOLLOW-UP AND EVALUATION

8.1. Follow-up arrangements

The Electronic Toll Committee's work will be monitored according to its work programme and the associated timetable (as detailed at its initial meetings) for tackling the objectives of the Directive. The first of these objectives is to introduce the European service for heavy goods vehicles across the entire toll road network in the Community by 1 January 2005. Monitoring of planning operations will allow checks to be made that work is proceeding as required.

The following service deployment indicators will then be defined: number of lanes in each toll station equipped for the service, number of subscriber points, etc. (to be specified in consultation with the Committee). The service will be put in place in 2004, at which point the indicators will be measured by a direct survey of the Member States.

8.2. Arrangements and schedule for the planned evaluation

A planning review of the Committee's work will take place every three months.

For the purposes of deploying the service, the measures based on the indicators defined in collaboration with the Committee will be updated initially every three months, and then every month from the second half of 2004.

An ex post assessment will take place in March 2005 to check that the whole of the service is functioning properly. This assessment will be contracted out to an external bureau selected by

invitation to tender. Its aim will be to check that the service has been deployed in accordance with the objective and, above all, to canvass the views of the customers concerned with a view to measuring levels of customer satisfaction and further developing the European service prior to its extension to motor vehicles in general. It will be possible for this study to be conducted in two stages: the first after three months (March 2005) and the second once the service has been in operation for a year (January 2006).

9. ANTI-FRAUD MEASURES

Not applicable

IMPACT ASSESSMENT FORM
THE IMPACT OF THE PROPOSAL ON BUSINESS WITH SPECIAL REFERENCE TO SMALL AND MEDIUM-SIZED ENTERPRISES (SMEs)

TITLE OF PROPOSAL

Directive of the European Parliament and of the Council on the widespread introduction and interoperability of electronic road toll systems in the Community

DOCUMENT REFERENCE NUMBER

THE PROPOSAL

1. Taking account of the principle of subsidiarity, why is Community legislation necessary in this area and what are its main aims?

For several years, the Commission has been encouraging the Member States to harmonise their projects in this field in order to avoid the creation of as many incompatible national systems as there are Member States, with each system requiring the installation of special electronic equipment in vehicles. Despite the many millions of euros invested in the research and development framework programmes and in the Euro-regional projects, this strategy has failed. Proof of this came in May 2002 when Germany and Austria simultaneously decided to adopt incompatible national systems.

The Directive creates the conditions necessary for implementing a European electronic toll service based on the principle of one single contract and one piece of on-board vehicle equipment giving access to the entire toll network in the Community.

The service is based on two technologies:

– the 5.8 GHz microwave systems used today on European toll motorways;

– satellite positioning in conjunction with mobile communications, an innovative solution based in the long run on Galileo, and the only one enabling the Commission and the Member States to implement the new road-charging policies they favour in order to manage demand more effectively, improve safety and help traffic flow more freely throughout the primary urban and interurban network. For the future, the Directive advocates the use of this second solution in preference to the first.

The Directive sets up an Electronic Toll Committee responsible, in consultation with the Member States, for handling all technical and contractual matters necessary for the implementation of the European service.

THE IMPACT ON BUSINESS

2. Who will be affected by the proposal?

– Which sectors of business? The manufacturers of electronic equipment for the car industry, infrastructure managers, and freight transport companies.

– Which sizes of business (what is the proportion of small and medium-sized firms)? From 1 to 5 000 people. All the manufacturers are SMEs. The infrastructure managers range from 200 people for the smallest companies to 5 000 for the largest. The size of freight transport companies varies considerably from one to several hundred employees.

– Are there particular geographical areas of the Community where these businesses are found? No, they are more or less evenly spread out, and will be even more so in the future.

3. What will business have to do to comply with the proposal?

The infrastructure managers will have to direct future investment towards the technical solutions indicated. They will have to equip their toll networks with the equipment indicated even if they do not currently offer electronic tolls. The old investments will nevertheless be maintained until they become obsolete.

The automotive suppliers will be given technical directions to follow to ensure the interoperability of all the systems used in Europe. This will facilitate their work for the years ahead as the indicated solutions are already well known and in use.

4. What economic effects is the proposal likely to have:

– on employment?: New skilled jobs will be created in the industrial and service sectors. For Germany alone, it is estimated that 40 000 new jobs will be created. It is estimated that for the 15 Member States, more than 200 000 skilled jobs will be created. The industry will be given a considerable boost in promoting its products on the world market, especially as the Directive promotes innovative solutions which are suitable for all conceivable types of road-charging policy.

– From the infrastructure managers' point of view, job losses could occur in the long run but these would all be seasonal jobs. In terms of permanent jobs, the staff which might be affected in 2010 could easily be reassigned to tasks such as subscriber services, after-sales service or motorway maintenance.

– on investment and the creation of new businesses? New businesses will be created in the fields of fee collection services, customer management and monitoring cross-border fraud. Other companies providing systems maintenance may also be created. This will already be the case in Germany in 2003.

– on the competitiveness of businesses? The competitiveness of businesses will be fostered by the implementation of open systems, which will no longer be proprietary as they often are at present. By means of its standardising effect and through its Committee, the Directive will ensure an open market from which no supplier will be excluded. It has been checked that no currently known supplier would be excluded from the market by this Directive.

5. Does the proposal contain measures to take account of the specific situation of small and medium-sized enterprises (reduced or different requirements, etc.)?

The whole technical sector of this market is made up of SMEs. The clauses of the Directive are perfectly suited to this situation. All of these businesses have for several years been asking the Commission to take legislative action to remedy the

blockage in the European Standardisation Committee and to allow them to base their products on a normative reference document. In the absence of compatibility with CEN standards, "EC Directive compatibility" will be a reference label expected by the whole profession.

CONSULTATION

6. List the organisations which have been consulted about the proposal and outline their main views.

Suppliers of electronic toll systems equipment: THALES e-transactions, CS ROUTE, KAPSCH, COMBITECH and Q-FREE indicate that the feasibility of equipment which would be interoperable and could communicate with all the electronic toll systems currently found in Europe:

– needs to be validated in terms of marketing,

– would require an infrastructure manager to issue an invitation to tender for one million units, and

– would call for a minimum of three years' development, finalisation and testing.

They make no commitments regarding the price of such equipment.

Infrastructure managers: ASECAP (European Association of Tolled Motorway Companies), ASFA (Federation of French Motorway and Toll Facility Companies), ASETA (Spanish Toll Road and Tunnel Association), AISCAT (Italian Association of Tolled Motorway and Tunnel Companies), ASFINAG (Austrian road toll concession holder), TOLL COLLECT (concession holder for the German electronic toll system), BRISA (Portuguese motorway concession holder) and RAPP AG (consulting firm for Swiss electronic toll systems) delivered a mixed opinion in respect of certain lines taken in the Directive, particularly the choice of technology.

Bilateral consultation meetings have taken place with the authorities of many Member States working with electronic toll systems (UK, FR, BE, NL, ES, PT, IT, AT, DE), as well as with Switzerland and the EFTA countries. A general presentation was made on 27 June for representatives of the 15 Member States. Comments made by various of the Member States have been taken into account.