

CONSIDERATIONS ON ROAD TRANSPORT CORRIDORS CROSSING HUNGARY¹²

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ABSTRACT

The paper firstly takes stock of a few of the lessons of the development of high-speed transport corridors at a European level. It then proceeds to define network development criteria which need to be satisfied so that the long-term Hungarian high-speed road network can be made suitable to help achieve regional, environmental, social and economic objectives that enjoy general political consensus. On the basis of these criteria, the paper critically reviews the currently applied long-term “2030” concept of the high-speed road network, and outlines requirements related to the density and structure of the network that would better meet the needs. By applying the long-term network evolved on the basis of comprehensive goals, the road-sections intended for construction in current programmes, including the motorway development programme of the Széchenyi Plan, can be analysed. It can be shown that one third of the short-term scheduled constructions do not fit in at all with the future high-speed road network and almost a further third could only be made to fit in with minor modifications.

¹ In preparing this paper the author used his own writing on a similar topic for the Magyar Közlekedési Klub's [Hungarian Transport Club] volume analysing Hungarian transport (ed. Dr. Károly Kiss) as well as the analyses of the strategic environmental study prepared for the Hungarian motorway network's development programme in the Széchenyi Plan (*See Fleischer – Magyar – Tombácz – Zsikla 2001*).

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NOW IS THE TIME

In September 2001 the European Union published its new transport policy, *Time to Decide 2001*. From the document's title it is apparent that the decision makers believe that a significant change of approach and direction is needed in transport policy mentality. Account had to be taken of the fact that demands for mobility were growing all the time, while the policy which attempted to satisfy and serve these expectations could not change the trend of constant deterioration: growing congestion, poor quality services, environmental damage, serious accidents, and the isolation of certain regions that is typical of the European (Union) transport situation today as well.

The main message of the new document is that *traffic growth must not be allowed to keep abreast of economic growth, which continues to be desirable*; the aim of intervention must be to restrict mobility and to achieve a more even balance in traffic between the various modes of transport.

In analysing the prevailing situation, the new transport policy carefully weighed the objectives and results of its predecessor, the 1992 Common Transport Policy. According to its main finding, the principal objective of opening up the closed transport markets of the countries within the European Union (with the exception of railways) has in essence been achieved over the last decade. It was also found that tariffs falling to a level below real costs and the growth in demand for road transport can be regarded as a consequence of this.

As both the transport policy adopted by the Hungarian Parliament in 1996 and the system of international transport corridors fundamentally influencing the eastern European transport structure took the objectives of the earlier 1992 Common Transport Policy as a basis, in analysing the current Hungarian situation developed in harmony with these objectives, it is worthwhile looking back at this now superseded document.

The European Union's 1992 Common Transport Policy

The basic principle of the 1992 Common Transport Policy (*See CTP 1992*) was *to create a single network for a single market*. The Union's common transport policy rested on seven pillars:

1. an efficiently working *internal market* facilitating the movement of people and goods;
2. a *coherent and integrated transport system* using the most appropriate technology;

3. a *trans-European transport network* linking national networks and enabling co-operation between them, and connecting the peripheral regions of the Union with the core area;
4. a *commitment to the environment* built into the transport system which promotes the solution of major environmental problems;
5. enforcing the strictest possible *safety regulations*;
6. a social policy protecting and serving the interests of workers in and users of transport;
7. *the development of relations with external countries*.

In terms of market and physical relations, these basic principles *deal with connections on a macro level*: the expression *internal* in this context means “within the Union, between Union countries”. According to the principle of subsidiarity, transport tasks which *affect internal relations of countries or regions* are not dealt with by the Common Transport Policy – as its name implies.

Trans-European Networks

The principal means of improving connections between countries in the EU’s concept is *Trans-European Networks*.

Trans-European Networks (TEN) comprise backbone components of European transport, telecommunications and energy networks. The development programmes created in the 1980s were discussed at the Strasbourg summit in 1989, then the concept became part of the Maastricht Treaty signed in December 1991, and, as has been noted, formed one of the pillars of the Common Transport Policy.

In practice *investments* necessary for the development of the network were given a deciding role within TEN’s range of issues, and within these 14 large projects were given priority by the European Council in December 1994. These projects were originally intended to be completed by the end of 2005. The dominant feature of the plan was the building of almost 5,000 km of high-speed rail track in the core territory of the EU connecting primarily to the French network, and the other focal point, further afield, concentrated on the modernisation of existing networks in outlying (Greek, Portuguese, Irish and Scandinavian) areas by upgrading them into motorways and traditional but modern railways suitable for speeds around 200 km/h.

The development needs of the *whole* of the trans-European transport network is about four times that of the 14 priority projects: estimates put the financing requirement at almost 400 billion euros by 2010, most of which (at least 90%) has to be generated by the countries directly affected by the projects (TEN Guidelines 1996).

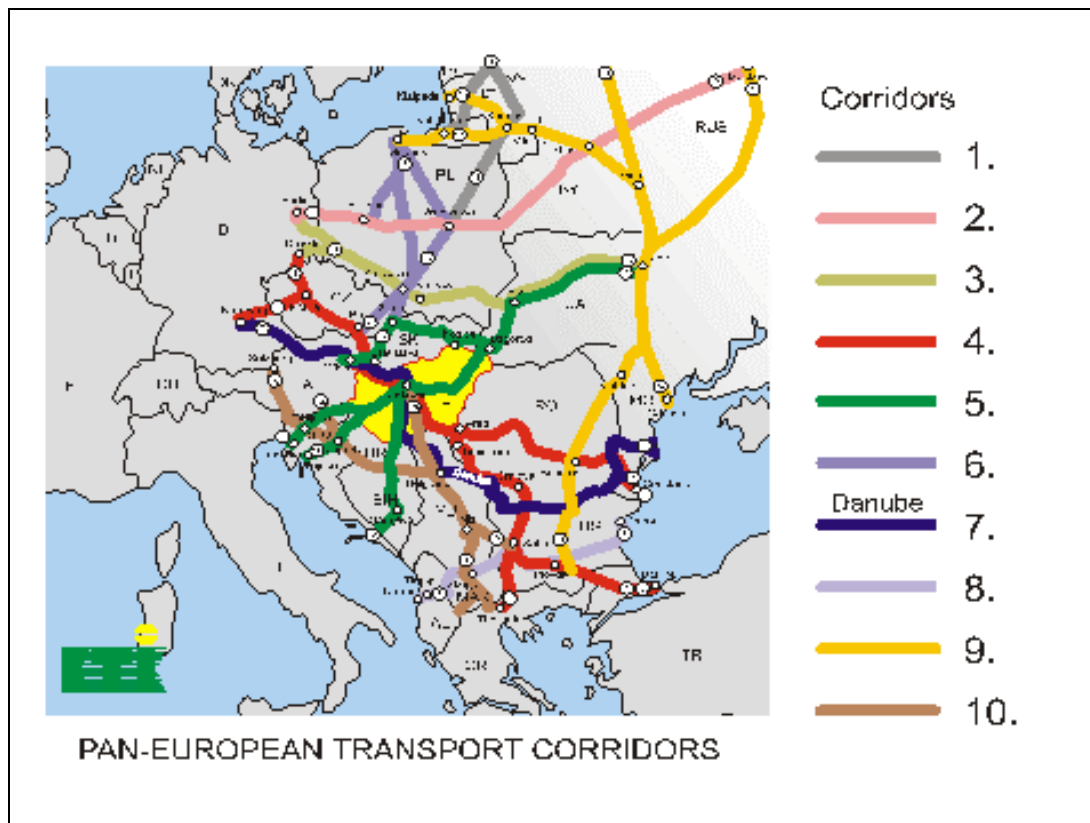
It needs to be stressed that TEN are entirely based on the concept that the regions' overlapping networks have to connect their existing, operating transport systems with each other.

In the countries of central and eastern Europe in line for accession, however, connection to the large European networks is by no means the only task to be solved. In these countries there has to be a parallel development of the today still inadequate national and regional networks in order to create working systems capable of appropriately providing connections within the regions and the country. Interregional network components cannot substitute for this inadequate internal system of connections: indeed, an existing and well-functioning capillary system that is capable of providing for local background connections is a precondition of trans-European backbone elements having their expected impact in the region.

Pan-European Corridors

From the start of the 1990s, due to the change of political system in countries previously excluded by the Iron Curtain and the consequent restructuring of commercial relations, the issue of east-west relations in Europe came increasingly to the fore. The existing and planned transport networks of the countries undergoing transformation came to be judged and assessed from a new viewpoint. That is to say, examining which network elements were able to function as a wider extension of the Union's TEN overlapping network plans became dominant.

At a European Union level the dialogue on the eastern extension of trans-European networks began at the 1st Pan-European Transport Conference in Prague in 1991. In 1994 the second conference in Crete defined nine concrete corridors to which the third conference in Helsinki in 1997 added another (*Diagram 1*). These are so-called *multi-modal* corridors (i.e. covering several transport sectors).



Source: http://www.khvm.hu/EU-integracio/A_magyarorszagi_TINA_halozat/Image11.gif

Diagram 1. The Pan-European or Helsinki Corridors approved by the Third Pan-European Transport Conference in 1997

The scarcity of north-south connections in the central European region is conspicuous. The only uninterrupted north-south connection is Corridor IX linking the Finnish and Greek networks in the eastern part of the region. In the zone more closely concerning Hungary, there is, for example, no connection between Slovakia and Hungary on the 660 km section to the east of Bratislava of the 668 km border between the countries. Except for Corridor IX, there is one other north-south connection which is formed of sections of Corridors I, VI, V, IV and X, and which in essence ensures the connection between candidate countries by access through Vienna. This clearly demonstrates that when the network was devised all regional aspects which did *not* support the extension of corridors previously developed by TEN played a subsidiary role.

The TINA (Transport Infrastructure Needs Assessment) Network

In 1995 the transport ministers of the EU and candidate countries initiated a separate programme for areas outside the pan-European network, that is a wider extension of TEN. The original aim of the TINA programme was *to assess the needs of*

transport infrastructure, to devise the assessment method for the network and development concepts, and to develop the information system for the network. The TINA report of 1998 (TINA 1998) shows candidate countries were given the opportunity of proposing *supplementary elements* for the network based on their own concepts. These elements, however, were from the start considered secondary priorities as *the backbone components were exclusively the Helsinki Corridors, or rather elements extending TEN planned from the western European viewpoint.*

It is worth recalling what a refined and circumspective method was applied by the TINA process to determine priorities: “... *the Commission proposed to use the results of the Conference as basis for the backbone network definition: the ten multi-modal Pan-European Transport Corridors. It was understood that all parties concerned agreed on the need for the Corridors so that further economic or financial justifications were not required.*”³ – This serves as an illustration of the unified methods devised for the assessment of the network development concepts.

The TINA process’s formal objective was to implement an assessment procedure. In practice, however, the end result operates as if it were a political body’s decision concerning a network. At the same time, no strategic environmental assessment was prepared for this network (“as TINA itself is an assessment and an assessment need not be assessed”). The TINA procedure, however, concentrated on traffic/technical and financial issues, thus it did not merely not examine thoroughly social and environmental aspects but it did not give the appropriate attention to network considerations either.

In recent years various central and eastern European countries have gradually woken up to the fact that the rapidly accepted backbone routes do not proceed at all in the manner required by *the region’s internal interdependencies.* Today efforts are being made to have other routes and new corridors accepted into the network additionally. If, however, it were to happen that their development could not be financed from the very modest EU subsidies, and pressures continued to exclusively focus on the building of the backbone routes of the extensions of TEN, the regional interests of candidate countries would come into sharp and unpleasant conflict with the interpretations of the TINA process.

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In the above, two issues regarding the extension of the backbone network from the eastern European point-of-view have been emphasised. The first was to draw attention to considering the multi-layeredness of the network of which the EU’s Common Transport Policy only concentrates on networks on an overlapping level. This programme, however, cannot be applied as an unchanged priority in regions where an

³ TINA 1999, p.25, 3.1.1. Backbone Network

appropriate fabric of local networks still needs to be created and where great attention needs to be devoted to internal networks on every level equally.

The other issue concerned the structure of the backbone network. While the development of TEN in western Europe was governed by an internal aspect, the intention of connecting national networks, in the eastern half of Europe, the extension of TEN, i.e. an external consideration, was the starting point for network formation. The TINA network's backbone elements that enjoy priority today still reflect traces of this procedure, and the danger remains that the additions which express the connection needs of candidate countries will get lost in the process.

The contradictory consequences of these conflicts from the viewpoint of the Hungarian networks will be shown below.

THE DOMESTIC HIGH-SPEED ROAD NETWORK: HISTORY, AIMS, THESES

Development of the High-speed Road Network

The individual functions of the high-speed road network can only be understood from the whole network, by analysing the three principal layers of the national network together.

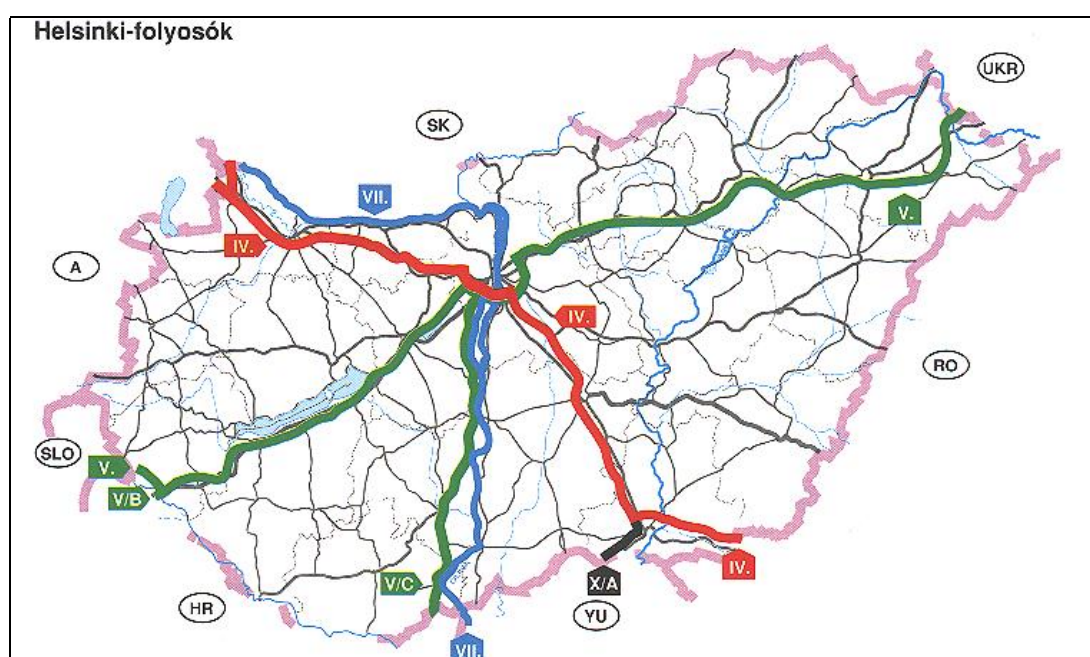
The most traditional layer of the Hungarian road network is the *secondary road network* that preserves the routes of paths and cart-tracks *linking neighbouring villages with each other*. The nature of the secondary road system is that it uniformly covers almost the whole territory of the country without conspicuous junctions.

With modest antecedents, the construction of the Hungarian *main road network* began in the middle of the 19th century, almost at the same time as railway construction. These are paved roads whose function today in part developed through the spread of motor-vehicular transport. The main road network directly *links cities together* and as far as possible bypasses villages. Main roads start in the cities, spreading radially, and in the network as a whole a *new structure* corresponding to the new function developed. Their structure indicated a certain measure of independence from the network of cart-tracks and their functions.

The development of the radial road and rail networks centred on Budapest played a great role in the fact that the Hungarian capital in the 1900s was a metropolis of comparable weight to Vienna and it became an obvious centre. At the same time, the preservation of the single-centred structure to the present day is regarded by all authoritative regional, transport, environmental and economic analyses as *an obstacle to further development and a retarding structural problem to be corrected*. Today

it has become clear that *changing the structure that has developed is the task of the new layer of the transport networks now being created.*

Hungarian motorways, constructed from the 1960s onwards, however, were built in the existing structure along the line of the most used sections of the main roads, serving to relieve traffic congestion. Until now motorways have been built in parallel with the sections starting from the capital of Main Roads 1, 3, 5 and 7. Network plans for the future have also got stuck on this level, and continuing the construction of these roads to the border is considered to be the priority. At European conferences the government has proposed the same routes as the routes for the most important Pan-European Corridors crossing Hungary (IV and V) (*Diagram 2*).



Source: Útgazdálkodás 1994–1998. (KHVM, Közúti Főosztály) [Highway Management 1994-1998. (Highway Department, Ministry of Transport, Telecommunications and Water Management)]

Diagram 2. The official Hungarian interpretation of the Helsinki Corridors in the road network 1998

In the course of using the motorways, originally built to relieve heavy traffic loads on the main roads in an organised way, it became clear that they were suitable to fulfil a wider variety of functions than this. Mass long-distance road transport of freight and passengers, which earlier would have been inconceivable by road, developed on the motorways that were built. The new possibility restructured the former relations between all modes of transport, and, contrary to all kinds of rational considerations, it also tipped the scales in favour of the road in terms of market relations. In fact no developed country was able to resist this pressure, and today, in spite of

transport policy declarations intended to reverse the trends, changes are only likely to occur very slowly.

In western Europe it was already acknowledged in the 1980s that the new dimensions of international traffic required thinking in *transport corridors*. The north-south and east-west multi-modal corridors conceived at that time can be regarded as the starting point for the trans-European transport network. The Common Transport Policy of the EU gave a concrete political framework to the recognition that by linking national markets together interconnections with each national transport network had to be ensured as well.

Transport corridors linking regions came to be *new structure-forming elements*. Just as through developing a new structure main roads linking *cities* were divorced from the former *intervillage* road network, the structure of the *interregional network* must also be divorced from the main road network linking cities, as it has another role. The main road network directly connects cities bypassing villages; *interregional corridors must connect regions and in doing so must bypass cities*.

Comparison of the Target Systems of Transport Policy and Other Domestic Documents

Apart from the chronological facts of building the networks, it is also worth examining the target system within the decision making process to which plans for high-speed roads have to conform.

In terms of content, the objectives of the documents dealing with the development of transport networks can be placed on three different levels. The *comprehensive objectives* set by sector policies and concepts are explicit policy aims that express long-standing, stable and essentially uncontroversial endeavours. In a welcome manner for the millennium in Hungary standards relating to the *environment* also form a part of this generally accepted target system in addition to prudent *social and regional* objectives. Such aims are prosperity, aiding development, achieving balanced regional and social relations, diminishing differences, better integration between sectors, harmony with nature, or co-operation with neighbours in the region. On the basis of our review (Fleischer et al. 2001) it can be stated that *on this comprehensive level the objectives of domestic regional, environmental and transport documents are in harmony with each other, or at least there is little significance in minor possible differences of emphasis from the point-of-view of the topics here discussed*.

On the second level the same sector policy documents define *professional objectives* to achieve the comprehensive objectives. Naturally, here the aims (and tasks) of the various sectors diverge, but a bigger problem than this is that *the professional objectives regularly contradict the document's own target system. Concentrating on our immediate topic, the networks, it is typical that, following a statement of general*

aims redressing regional imbalance and reducing the single-centredness of the country, ineffectual professional solutions for the need to change the spatial structure are expressed or network elements that expressly increase centralisation are given priority. It appears that professional targets are very inert; they are slow to change and in effect lead a life of their own, independent of comprehensive governmental and sectoral objectives. In other words, while the modern formulation of comprehensive sector policy aims meets no resistance, bringing these same aims about on a professional level is a more difficult and slower process. As regards the transport network, the *significant priority of developing backbone networks* carrying transit traffic to the detriment of the local networks, which has a concentrating and not an equalising effect, and the *radial structure of backbone networks* with the effect of increasing centralisation, that is strengthening the capital-provinces *incline*, are apparent.

Developing the networks has a third, *practical level*, and this, even compared to how it is expressed in the professional policy documents, shows inertia and ineffectiveness. While, in spite of the above negative aspects, slow movement is observable in the professional plans for the sector – appearance of grid-like elements, bridges, links bypassing the capital –, *professional practice diverges consistently in a conservative direction even from the declared professional plans.*⁴ Furthermore, the road sections that are built contrary to the plans inevitably have repercussions on the plans themselves inasmuch as the plans have to be constantly adjusted in the light of what has been built in reality.

Among the documents concerning this topic, special mention should be made of the *Hungarian Transport Policy* adopted by the Hungarian parliament in 1996 (Közlekedéspolitiká 1996), and still in force today, which has five main strategic thrusts:

- *promoting integration to the European Union,*
- *improving conditions for co-operation with neighbouring countries,*
- *promoting the more balanced regional development of the country,*
- *protecting human life and the environment,*
- *the efficient operation of transport conforming to the market.*

The development of the motorway and high-speed road network is strongly affected by the interpretation pervading the whole of transport policy which sees European accession as being promoted primarily *by building transit and backbone net-*

⁴ Examples of these are having the new motorway leading from the capital, which had not been given priority in domestic plans, accepted as Corridor V/C in Helsinki, or declaring Main Road 2/A, made from the funds allocated for building bypasses on main roads, as the M2 high-speed road. This also involves the building of the M0 ring's northern section ahead of schedule, which had not otherwise been given priority and does not help in bypassing the capital.

works as soon as possible. No study has been made within the framework of the transport policy of the network interconnections of high-speed roads. The transport policy encouraged the rapid building of transit directions based on the network of the earlier 1991 road development programme (Országos közúthálózat-fejlesztés 1991) [National Road Network Development 1991], where the “transit directions” (Main Roads 1, 3, 5 and 7) obviously meant the priority of channels crossing the capital.

Three Theses on the Development of the High-speed Road Network

Bearing in mind both the above considerations and the high-speed road network concepts of the last decade, a few important requirements for the network to be built can be reached. These can be summarised as follows:

The interregional network, in compliance with its function, should be created with a structure separated from the secondary and main road networks. These networks should cover the country separately, i.e. their only function is not to serve their immediately superior level. The interregional network is one of the levels of the multi-layered transport structure.

The development of the “radial-orbital” network formerly suggested by the profession cannot be an objective. The radial-orbital system is also single-centred; it reflected the endeavours of a closed country to progress beyond the radial system. Today, in an open country, the development of an open grid structure should be set as the target. (See Diagram 3.)

The first goal is to link domestic regions in an interregional network, and not to ensure corridors crossing the country. In spite of this – due to Hungary’s location, which is partly an advantage but partly a disadvantage – the transit traffic of the busiest Pan-European Corridors has to be reckoned with as well. The aim is that the through-traffic should disturb the life of the country as little as possible. To achieve this, the transit corridor should (a) link the border points marked on the Pan-European Corridors, (b) cross the country with the minimum total length, (c) avoid ecologically sensitive or densely populated areas and those with heavy traffic loads, (d) encourage the use of vehicles and transport modes that pollute the environment less, (e) ensure through-traffic pays for the transit costs.

The geometric requirement for the minimum length transit has been proposed in earlier works (Tombácz et al. 1993, Fleischer 1994), thus here only the network model developed using it is presented.

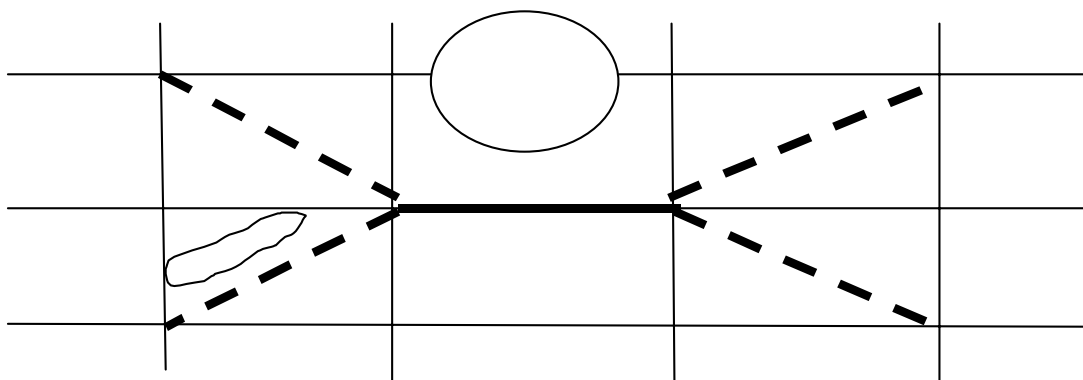


Diagram 3. The model for the domestic interregional open grid network with east-west and north-south corridors. The minimum length crossing of Pan-European Corridors IV and V marked by the thick line requires the insertion of diagonal elements.

Apart from the network elements, Diagram 3 shows two sensitive areas (the resort area of Lake Balaton and the conurbation of Budapest) through which it would not be practical to force transit traffic.

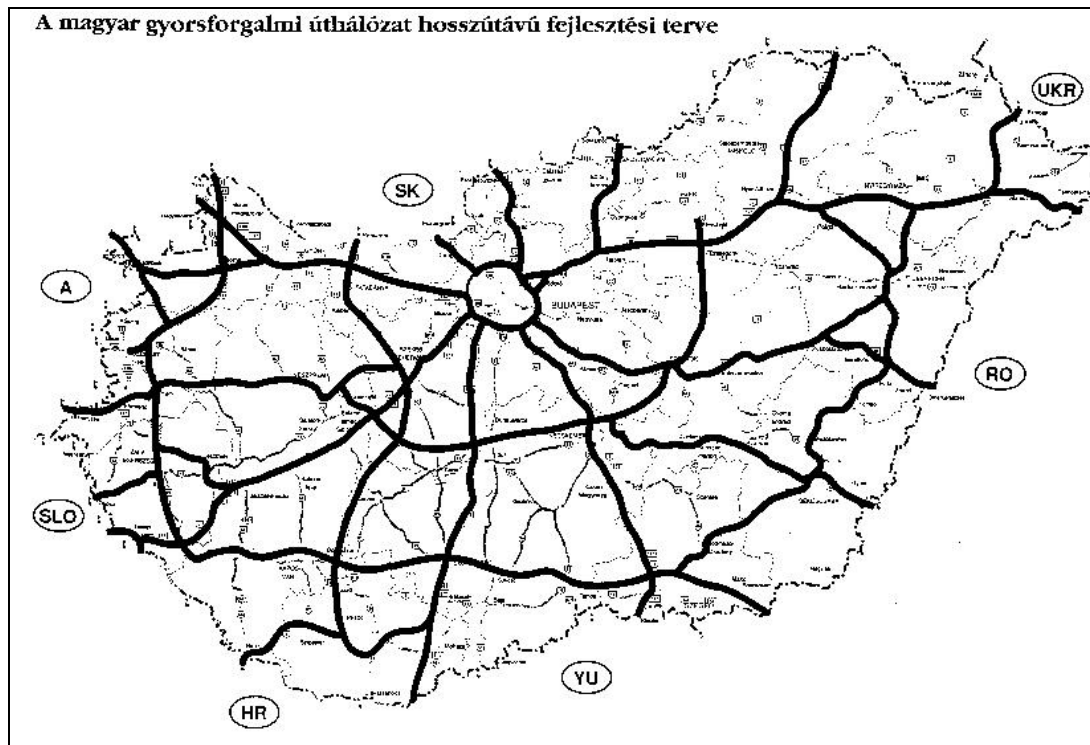
ASSESSMENT OF THE HIGH-SPEED ROAD NETWORK DEVELOPMENT PROGRAMME

Assessment of the Whole Network

Diagram 4 shows the current official long-term plan for 2030 for the high-speed road network. This network is examined below from the viewpoint of the principal requirements of the *network-forming logic* described above.

(a) The long-term high-speed road network preserves the lines of the radial-orbital concept, while at the same time, particularly in Transdanubia, its continuity is disrupted, and corridors of a grid network appear. This duality may be interpreted as a sign of development; but here, more strictly, it should be considered inconsistency and a structural flaw: a combination of the logic of the grid-axis and the ring structures. One example of this is Main Road 8's turning into a "central ring" which ends at Eger.

(b) The whole network in itself preserves the unclearness and mixture of the functions of the main road network and the functions of the interregional corridors. Today even main roads "linking cities" have to bypass inner city areas but, nevertheless, the basic structure of the main road network remains unchanged and bypassing main roads do not become suitable for coping with national transit traffic. Particularly on the side of the Great Plain, the long-term high-speed road network almost exclusively comprises today's main roads.



Source: Szabó László (1999) Fejezetek és dokumentumok...Állami Autópálya-fejlesztő és -kezelő Rt. [Chapters and documents...State Motorway Development and Maintenance Rt.]

Diagram 4. The long-term development plan for the Hungarian high-speed road network, 1999

(c) Similarly, the fact that *the high-speed road network intends to directly serve precisely those traffic-sensitive areas that it should relieve* can be attributed to the unclearness of functions. Tightly surrounding the Lake Balaton area with corridors carrying interregional traffic, and the fact that the network does not trust the functioning of its own east-west load-relieving elements (Roads 8 and 9) and approaches the capital by further radial high-speed roads can be considered errors of this nature. (At present seven one-figure main roads start from Budapest. The long-term plan adds another *eight* high-speed roads: a further four in addition to the four motorway approach sections already built!)

(d) Unclearness of principle and function is indicated by *certain cities being connected to corridors crossing their vicinity by 'cul-de-sac' high-speed links*. Naturally, both Szombathely and Eger need to be linked to corridors: but, as *main roads* of suitable capacity link the urban centres of Székesfehérvár or Győr to passing corridors, planning prestigious interregional branch roads in the above cases is not justified either. Although not a cul-de-sac branch, the development of the Zalaegerszeg-Balatonszentgyörgy link to an interregional level is a similar error.

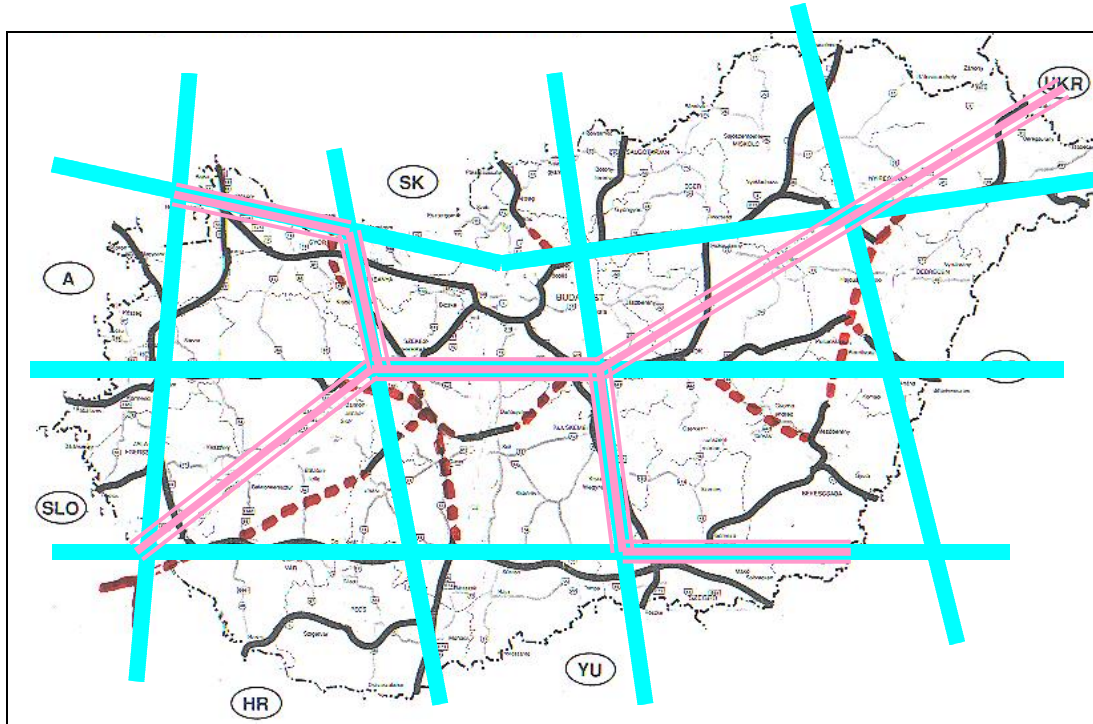
(e) Unclearness of principle appears on the map as *parallel corridors close to each other*. A corridor's task is to funnel in traffic from a broad band and thus relieve the area of the load of transit traffic that has no reason to be there. Nearby parallel corridors indicate that the planners concentrated not on solving this task but on upgrading existing roads. Unjustified parallels of this kind are the M4 motorway approach to Budapest next to the M5, and one section of the M7 and the M61. Another similar parallelism is the density of high-speed border links along the western border.

(f) Although they cannot always be eliminated, *small triangles* on the map usually indicate unclearness that needs to be resolved. At the M3-M0 junction, the link from Gödöllő was justified, but the other short lines in the logic of a high-speed road network are erroneous, even if one of them represents an already built section of motorway. It is also worthwhile considering in the Polgár-Nyíregyháza-Debrecen triangle whether the separate construction of the "direct" Nyíregyháza-Debrecen link could, by modifying the current route, be discarded. In the case of the Veszprém-Székesfehérvár-Aliga triangle the error already referred to above, the erroneous intention of relieving the shoreside road with the M8 causes a problem. If it is conceded that on the Fűzfő-Aliga route the construction of a main road bypassing the towns and not the draw of a transit corridor is needed to solve the local problem, naturally it will neither arise that there should be two separate high-speed road corridors leading from Veszprém towards Székesfehérvár and Lake Balaton.

In addition to the above it can be stated that *the plan for the long-term high-speed road network is suitable to serve as a starting point for the development of three clearly defined east-west axes of an open-grid structure. Furthermore, in the western part of the country two north-south corridors have been outlined to a greater or lesser degree: the 86 axis also serving the Bratislava-Zagreb link, and the Komárom-Székesfehérvár-Dombóvár-? route, which for the time being seems to have come to a halt in the south. As regards the network in the eastern part of the country, similar basic routes have not even been formulated in principle,* with the exception of the north-south corridor of the additional TINA element of Košice-Oradea. The long-term network of the Transisza region is entirely built on current main roads, while the economic poles, which receive great emphasis in regional plans, would be better served by a few more generous new links.

Finally, *something which is not even considered in the long-term high-speed road plan is the relocation of Pan-European Corridors IV and V, currently meeting in the capital, to the east-west axis to be developed on the centre line of the country.* To achieve this, the diagonal directions on the envelope form marked in *Diagram 3* need to be put in place. From the south, junctions will necessarily develop from the direction of the M7 and M5 with the M8-M4 axis; towards the north-east the M4 will likewise create a link towards Debrecen-Nyíregyháza, and only from Győr along the route of Road 81 should the development of the network be reassessed. On the whole these are not great deficiencies. However, the currently planned network presents the

reassessment of the designated load-relieving link as almost impossible since the proposed new Veszprém–Cegléd–Szolnok base corridor fulfils peripheral, supplementary functions, to which the routes have also been adapted, instead of this large-scale concept. *We consider the key element of the future of the high-speed road network to be understanding the role of the link between Veszprém and Szolnok, and its development as soon as possible with the features appropriate for this role.*



Source: based on *Diagram 4* and the application of principles outlined in this study

Diagram 5. Outline of an alternative proposal to develop a long-term high-speed road network

Diagram 5, prepared with the intention of correcting the above problems, shows the *density and structure* of an alternative high-speed road network largely satisfying our assessment criteria. In the course of the corridor-level assessment, we wish to consider the alternative network from only one aspect: that is identifying on the basis of our strict requirements those elements of the officially published construction programmes which should be developed, and those elements whose construction as high-speed roads should at least be questioned.

How the Corridors Fit Into the Domestic Network

On the basis of the above, within the interregional links we favour the route of *the two diagonal pan-European (multi-modal) transit corridors crossing Hungary* which are able to relieve traffic-sensitive areas, that is take the “minimal road” model

of *Diagram 3* as a basis, and do not cross the area of the capital and busy holiday resorts. The interconnection of the country's regions and the links with trans-boundary neighbouring regions must be provided by the axes of an open-grid network, that is east-west and north-south corridors, thereby achieving the general regional and professional objectives in respect of promoting the formation of economic poles, reducing regional differences, environmental protection, safety, etc. One part of the corridors to be thus examined, however, is for the time being – and also in official documents – only indicated in principle, frequently being simply drawn over existing roads; in this context they are primarily suitable for assessment at a network level.

Programme elements which today appear as goals of actual motorway development or are in part under construction are summarized in the Széchenyi Plan and the Széchenyi Plan Plus. At the same time, these projects show little in common with the general principles declared when they were announced. The Széchenyi Plan did not formulate the sections in its motorway construction programme from its own objectives, but adopted the most current version of the several times modified ten-year development programme of the Ministry of Transport. The basis of the ten-year programme was the interpretation of the pan-European corridors as in *Diagram 2*.

The central element of the high-speed road network's new structure is the transformation of the single-centred radial system shown in *Diagram 2*. In the new structure the southern section of the M0 has to stop being used for both the heavy traffic of the capital and national network, and as a common element of Pan-European Corridors IV and V. Thus the future forced expansion of the most congested approach sections to the capital and the southern section of the M0 can be avoided, and on the sections with the heaviest traffic the large-scale mixture of various types of traffic with varying ability to pay can be reduced.

In the official concept Corridor IV comprises the M1–M0–M5. Instead of this we propose that the M1–M81–M8–M5 link form Corridor IV.

In the plans Pan-European Corridor V is formed by the M7–M0–M3. We propose that the route for the Corridor follow the M7–M8–M4. Taking the transit corridor through the Lake Balaton resort area is a serious mistake. Naturally, it is justified to make the main road currently going through the towns of the southern shore bypass the towns, but this should remain a *national main road* and should not become a transit corridor.

In the M0 area we believe the two most important tasks to be the development of the already built but accident-prone southern section into a motorway, and the construction of the eastern section from the M5 to the Gödöllő junction of the M3, thus linking the approaches to the capital of the M1, M7, M5, M3 motorways to the network.

Assessment of Sections Scheduled for Short-term Construction in the Széchenyi Plan

On the basis of network considerations, the authors of the aforementioned work (Fleischer et al. 2001) reviewed the high-speed road developments of the Széchenyi Plan. The assessment of the motorway construction programme of the Széchenyi Plan and the Széchenyi Plan Plus examined in particular the extent to which the road sections announced in the programme conformed with the above outlined high-speed road network developed in harmony with the economic, environmental, regional and social objectives of the Széchenyi Plan.

In the original plan 20 sections were earmarked as motorway or high-speed road development projects, and the supplementary programme added ten more items. Here we only give a summary of the detailed analysis of the sections. Accordingly, of the 30 projects announced in total, the *construction of 12 fitted into* the framework of the network shown above. For a further 7 projects the construction of a high-speed road was *justified* for the section featuring in the objective, *but* the network connection system *significantly modifies* their location and route; and in another 11 cases *there is no need* for the construction of a high-speed link. From the proportions it can be seen that only a good third of the works scheduled to start in the short term are in harmony with the aims outlined in this study (and also harmonising with the general aims of the Széchenyi Plan).

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We have not discussed above that in the course of developing the required network the *urgency* of constructing corridors would also change, and thus for instance the role of the Győr-Székesfehérvár section, which does *not feature* in the plan, would also be upgraded. As a result, the whole of the long-term high-speed road network needs to be rescheduled, and a new ten-year (seven-year) road network development programme needs to be prepared, which concomitantly rethinks the role of the secondary, main and high-speed road networks. Options for temporary substitutes must be thought through in a harmonised manner, as in the period of development the modernised main road network (bypassing towns) will *for a while* be able to substitute for light-traffic sections of the high-speed road network. This, however, cannot lead to the unjustified increase of the capacity of the main network (not necessary in the long term); for an appropriate period the high-speed road network elements will have to take on the transit-type traffic. Naturally, this network planning and programme preparation task cannot be solved by this study, which seeks to appraise the strategy.

Finally, it should be pointed out that, in addition to the network logic, the above assessment, taking into account the high-speed road network's structural interdependencies, primarily considered the requirements of harmony between the high-speed road network and other elements of the road network. A broader study than this is needed to analyse the whole of domestic transport policy in a similarly com-

prehensive manner. The European Union's new transport policy, mentioned in the introduction, affords a good opportunity for this, and in any case it would be expedient to compare the reasoning on which it is based with domestic ideas. It is also true in Hungary – and perhaps this study supports this on a number of points – that answers to the technical problems of the past are sought through today's transport developments, while strategic interdependencies which become perceptible in full regional, environmental, social and economic contexts are disregarded. In developing the new transport policy, issues of real strategic importance should be concentrated on. Now is the time: "Time to Decide", to quote again the title of the EU document.

SUMMARY

The single-centredness of the national spatial structure, the east-west incline, the intention of easing the dual economy structure, promoting a balance between the regions, protecting the country's sensitive areas from excessive transit traffic, the intention of improving living standards within settlements, and developing contacts with neighbouring countries are all *comprehensive policy objectives* in which domestic regional, economic, transport and environmental policies are in harmony with each other in accordance with the target system of the documents they are founded on.

The professional strategies selected to reach the set goals are much more contradictory, as they not only differ from each other from sector to sector but occasionally even within a sector contradict the main objectives of the same document. At the national level of transport network planning, the sector is still today trying to realise concepts that are decades old with structurally speaking very modest and very incidental modifications. There has not been a comprehensive analysis of goals and strategic tasks; the sector's main programmes in part provide answers to challenges of the past.

In our study we first analysed a few of the lessons of the development of high-speed corridors on the European scale. Subsequently, we defined the network development criteria through the satisfaction of which the long-term domestic high-speed road network may be made suitable to promote general regional, environmental, social and economic goals enjoying a consensus in Hungary. By making these criteria the basis, we questioned the currently valid long-term concept of the "2030" high-speed road network, and attempted to present the density and structure of a network better meeting the needs. This network was then used to distinguish corridors scheduled for development and featuring in current programmes, such as the motorway construction development of the Széchenyi Plan, the development of which was also supported by the long-term network plan evolved from comprehensive objectives, from corridors whose construction should at least be questioned on the basis of these criteria.

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**CONSIDERATIONS
ON ROAD TRANSPORT CORRIDORS
CROSSING HUNGARY⁵**

Tamás Fleischer

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⁵ In preparing this paper the author used his own writing on a similar topic for the Magyar Közlekedési Klub’s [Hungarian Transport Club] volume analysing Hungarian transport (ed. Dr. Károly Kiss) as well as the analyses of the strategic environmental study prepared for the Hungarian motorway network’s development programme in the Széchenyi Plan (*See Fleischer – Magyar – Tombácz – Zsikla 2001*).