Implementation of the Pan-European Corridors Concept: The case of Corridor X

Secretary: Ch. Taxiltaris, Professor
Members: G. Mintsis, Professor
S. Basbas, Assistant Professor
M. Miltiadou, Transport Engineer
S. Varaki, Transport Engineer

Aristotle University of Thessaloniki
Egnatia Str., 54124 Thessaloniki, Greece,
tel. +30 2310 996154, fax +30 2310 996030,
transp@edessa.topo.auth.gr
Website: http://edessa.topo.auth.gr/X
The Corridors concept

- Prague Declaration on All-European Transport Policy, 1991
  - Foresaw the indication of the most important transport routes
- Crete Declaration, 1994
  - Set of indicative guidelines covering the main infrastructure Corridors for the various transport modes
  - Definition of nine Corridors
- Helsinki Declaration, 1997
  - Definition of Corridor X
  - Definition of Transport Areas
  - Overall objective: promote sustainable, efficient transport systems
  - Sub-objective: promote rehabilitation or reconstruction of problematic links, giving priority to measures, which better exploit existing infrastructures
  - Mean: collective and coordinated effort of all parties concerned in order to ensure appropriate investment schemes
Definition of Corridor X

- 2.300km roads
- 2.528km railways
- 12 airports
- 4 sea- & river-ports

Main Axis:
Salzburg – Ljubljana – Zagreb – Beograd – Nis – Skopje – Veles – Thessaloniki

Branch A:
Graz (Austria) – Maribor (Slovenia) – Zagreb (Croatia)

Branch B:
Budapest (Hungary) – Novi Sad (Serbia) – Beograd (Serbia)

Branch C:
Nis (Serbia) – Sofia (Bulgaria) and further via Corridor IV to Istanbul

Branch D:
Veles (F.Y.R.O.M.) – Bitola (F.Y.R.O.M.) – Florina (Greece) and further via Florina – Kozani (via Egnatia) to Igoumenitsa
Structures for the development of Corridor X

- Preparative meetings of delegations of countries concerned and representatives of the European Commission and other International Organizations
- 15 March 2001: Signing of a Memorandum of Understanding (MoU) by the Ministers of Transport of the participating countries and the European Commission
- MoU
  - Aim: Cooperation for the development of Corridor X infrastructure, operation and use
  - Means for implementation of the MoU:
    - General rules on studies
    - Exchange of information
    - Agreement on technical standards providing interoperability
    - Border crossings and customs cooperation
    - Framework for the participation of private sector and International Financial Institutions
    - Definition of priorities, budgets, time-plans for specific measures
  - Coordination by the Steering Committee
Steering Committee for the implementation of the MoU

- Delegates of the eight countries participating in Corridor X and representative of the European Commission + observers (International Organizations and third countries)
- Meets at least once a year
- Chaired by Greek Ministry of Transport since 1999 until 2007
- Supported by a Technical Secretariat (T.S.)
  - Assigned to the Department of Transportation and Hydraulic Engineering of the Faculty of Surveying Engineering of Aristotle University of Thessaloniki
The role of the Technical Secretariat of Corridor X (1/3)

- Collection and evaluation of existing information and relevant studies with respect to Corridor X
- Coordination and monitoring approach:
  - Annual questionnaire based surveys in all countries of Corridor X
  - Extended on-site visits for expertise and meetings with members of the road and rail authorities and organizations in each country
  - Collection of reports from various sources (international and national organizations) about Corridor X
  - International cooperation
    - European Commission – DG TREN
    - Other Corridors in the area
    - UN/ECE Transport Division
    - European Investment Bank
    - Infrastructure Steering Group of the Joint office for SEE of EC and World Bank
The role of the Technical Secretariat of Corridor X (2/3)

- Data analysis – Development and maintenance of a Database and a relevant Geographic Information System (GIS)
- Dissemination of results: Reports, papers, conferences, Website
- Inventory of existing studies and evaluation and exploitation of their results
- Suggestions for the terms of references for new studies
- Examination of conditions providing interoperability and promoting intermodality
- Assistance to participating countries for the involvement of the private sector and International Financial Institutions
- Traffic flows forecasting study for definition of priority needs for projects
The role of the Technical Secretariat of Corridor X (3/3)

- Contribution to the optimization of border crossing operations and procedures
  - Questionnaire-based survey
  - On-site visits for expertise
  - Constitution of a Working Group under the Steering Committee for the improvement of border crossings along Corridor X
    - Huddled three times already
    - Protocol for cooperation of all authorities involved in border crossing procedures to be signed in spring 2006

- Exchange of information with South East Europe Transport Observatory (SEETO) – Technical Secretariat for the implementation of the SEE Core Network
State of play of Road Corridor X

- Total length: 2.299,6km
- 59% of the road network consists of motorways
- Permitted maximum speed along the road axis: 120km/h (in most of the parts)

Description of existing and future infrastructure:

- **Main Axis:** 1.451,4km [1.164,6km (80%) motorways – 1.306,3km (90%) by 2008]
- **Branch A:** 163,4km [90km (55%) motorways – 147km (90%) by 2012]
- **Branch B:** 352,9km [99km (28%) motorways – (100%) by 2009]
- **Branch C:** 191,8km [142km (74%) motorways by 2010]
- **Branch D:** 140,1km [rehabilitation plans to be defined]

By 2012 Road Corridor X will be constructed and will operate in motorway profile at great extend and if accompanied by measures at border crossings would be fully operational.
## Progress of motorway construction on Road Corridor X since 2001

<table>
<thead>
<tr>
<th>Part of Corridor X</th>
<th>Country</th>
<th>Section</th>
<th>Total Length (km)</th>
<th>Constructed Length (km)</th>
<th>Planned Completion of Construction in 2005 (km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Axis</td>
<td>Slovenia</td>
<td>Bic – Obrezje</td>
<td>75,5</td>
<td>46,7</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Slovenia</td>
<td>Vrba – Naklo</td>
<td>20,9</td>
<td>4,3</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Croatia</td>
<td>Velika Kopanica – Zupanja</td>
<td>24,13</td>
<td>24,13</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Croatia</td>
<td>Zagreb – Bregana</td>
<td>13</td>
<td>13</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Serbia</td>
<td>Belgrade bypass</td>
<td>35,5</td>
<td>16,8</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>F.Y.R.O.M.</td>
<td>Gradsko – Demir Kapija</td>
<td>31,5</td>
<td>25,3</td>
<td>6,2</td>
</tr>
<tr>
<td>Branch A</td>
<td>Slovenia</td>
<td>Maribor – Gruskovje</td>
<td>38,8</td>
<td>2,4</td>
<td>-</td>
</tr>
<tr>
<td>Branch B</td>
<td>Hungary</td>
<td>Kiskunfelegyhaza – Szeged</td>
<td>46,2</td>
<td></td>
<td>46,2</td>
</tr>
</tbody>
</table>

### Total
- **A = 132,63 km**
- **B = 52,4 km**

⇒ 132,63km (40%) constructed in the period 2001-2004

⇒ A+B = 185,03km (55,7%) by the end of 2005
State of play of Rail Corridor X

- Total length: 2528.2km
- 64% Single track alignment – 36% Double track alignment
- 89% Electrified

Description of existing and future infrastructure:

- **Main Axis:** 1742.3km (55% single track alignment – Fully electrified)
- **Branch A:** 154.3km (70% double track alignment – Fully electrified)
- **Branch B:** 305.6km (96% single track alignment – Fully electrified)
- **Branch C:** 161.0km (95% single track alignment – 90% diesel)
- **Branch D:** 165.0km (100% single track alignment – Fully diesel)

- 12% Sufficiently maintained (+ 10% in Austria probably + 22%) – 71% Medium level of maintenance – 7% Poor maintenance

- Limited investments for the improvement of the railway infrastructure of almost the whole (90%) network have been planned by 2010
Effective investments on Corridor X during the last decade

<table>
<thead>
<tr>
<th>Country</th>
<th>Investments (millions of euros)</th>
<th>Period</th>
<th>Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>499,5</td>
<td>1996 – 2002</td>
<td>Railways</td>
</tr>
<tr>
<td>Slovenia</td>
<td>819,7</td>
<td>1994 – 2004</td>
<td>Roads and railways <em>(data for roads only for 2003-04)</em></td>
</tr>
<tr>
<td>Croatia</td>
<td>89,5</td>
<td>2003 – 2004</td>
<td>Roads and railways</td>
</tr>
<tr>
<td>Hungary</td>
<td>367,5</td>
<td>1994 – 2002</td>
<td>Roads and railways</td>
</tr>
<tr>
<td>Serbia</td>
<td>66,8</td>
<td>1994 – 2002</td>
<td>Railways</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>No data</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>F.Y.R. of Macedonia</td>
<td>25,8</td>
<td>1994 – 2002</td>
<td>Railways</td>
</tr>
<tr>
<td>Greece</td>
<td>47,5</td>
<td>2003 – 2004</td>
<td>Railways</td>
</tr>
</tbody>
</table>

1.92 billions of euros
Estimation of required investments on Corridor X

- **Road Corridor X**
  - ~ 4boEuros
  - 41.84% (1.67boEuros) committed
  - Required investments: 2.33boEuros

- **Rail Corridor X**
  - ~ 4boEuros
  - 1.8% (71.2моEuros) committed
  - Required investments: 3.93boEuros

**TOTAL REQUIREMENTS: 8bs Euros**

**REQUIREMENTS FOR NEW PROJECTS: 6.26bs Euros**
Conclusions

- **Corridor X:**
  - Backbone of the Core Transport Network of the Western Balkans
  - Priority for the European Commission HLG-2
  - Model for other, less developed, Corridors
  - Based on the will of the countries

- **Role of Corridor X’s structures:**
  - Encouraging to development efforts per country
  - Mechanism able to present Corridor X at every turn and the perspectives of the Corridor in function with decisions and initiatives
  - Observatory of the progress of implementation
  - Basis for documentation of existing situation and development planning
Corridor X Website
http://edessa.topo.auth.gr/X

CO-OPERATION TO SUPPORT THE DEVELOPMENT OF PAN-EUROPEAN TRANSPORT CORRIDOR X

Multimodal Pan-European Transport Corridor X: Salzburg - Ljubljana - Zagreb - Belgrade - Novi Sad - Skopje - Velenje - Thessaloniki including its branches:
A: Graz - Maribor - Zagreb
B: Budapest - Novi Sad - Belgrade
C: Thessaloniki - Thessaloniki - Istanbul via Corridor IV
D: Velenje - Bitola - Florina - via Igoumenitsa

The aim of the cooperation between the participating countries will be to co-operate in the development of main and auxiliary infrastructures on Corridor X.
The development of the Corridor X should include maintenance, reconstruction, rehabilitation, upgrading and new construction of road and railway infrastructures, as well as in the operation and use of them, with a view to fostering the most efficient and environmentally friendly transport modes (infrastructure and services). The cooperation further aims at projecting and defining prerequisites and conditions for the most efficient use of funds and know-how provided by public and private sources.
The Hellenic Ministry of Transport and Communications has initiated the establishment of the Technical Secretariat of the Steering Committee for Pan-European Corridor X during the 2nd Meeting of the Pre-Steering Committee for Pan-European Corridor X, on November 26th 1999 in Thessaloniki.

The role of the Technical Secretariat will be to become active especially in the collection and evaluation of already existing relevant studies and information and in the event that the existing criteria not be supplemented with respect to Pan-European Corridor X. The Technical Secretariat has started officially its operations, according to the approved work programme by January 1st 2000, with March 2004 as horizon of completion of operations.

Before the 3rd Steering Committee Meeting, on March 15th 2001, a Memorandum of Understanding had been signed by the Ministers of Transport of the Corridor X’s countries.

The extension of the Greek Chairmanship until March 2007 was decided during the 6th Meeting of the Steering Committee (Thessaloniki, 27/2/2004).

Concerning the operation of the operation of Corridor X, during the 5th Meeting of the Steering Committee (Istanbul, 15/7/2003), the constitution of the Working Group for the improvement of border crossings along Corridor X was decided. Since then, the Group has met twice (January 2004 and February 2005) targeting to an agreement on a Protocol for cooperation on border crossings issues to be signed by the end of 2005.

Members of the Technical Secretariat

Scientific coordinator: Christos TAILARIS, Dr., Transportation Engineer, Professor

Members
- Sotiris BAGNAS, Dr., Transportation Engineer, Assistant Professor
- George MELISSIADIS, MSc, Transportation Engineer, Professor
- Mario MELISSIADIS, MSc, Transportation Engineer, MSc, Regional Planning, Development and Management

Webmaster: Mario MELISSIADIS, MSc, Transportation Engineer, MSc, Regional Planning, Development and Management