

WIGAND RITTER, Prof. em. Dr. rer. oec.
Universität Erlangen-Nürnberg
Fak. für Wirtschafts- u. Sozialwissenschaften
Lange Gasse 20
90403 Nürnberg, Germany

Traffic Planning
Scientific Paper
U.D.C. 656.027(55/58)
Accepted: Mar. 2, 1999
Approved: Apr. 19, 1999

A TRANSPRAPH-NETWORK FOR THE NEAR EAST?

ABSTRACT

In this paper chances and some of the difficulties for the introduction of Transrapid in the Near East are discussed. It seems important not to regard this area as an extension of Europe but as having specific needs for rapid transport. Like the railways about 100 years ago Transrapid will not fit smoothly into Near-Eastern patterns of economic and social life and the essential precondition of peace and of co-operation between the governments may not be fulfilled within the next 50 years. In the author's opinion a transarabian axis between Jeddah and Masqat is the most auspicious project one can think of today. A start might be made with it any time, that is at the very moment when Transrapid will have proven its usefulness and profitability.

KEY WORDS

Transrapid, Near East, rapid transport, innovation transport

1. INTRODUCTION

If ever a high-speed transport-network should come about within the next 30-50 years in the European Union it seems certain that Turkey will be linked into it. What about extending it conceptually into the Arab Countries beyond Turkey and into Kaukasia and Iran? That is, what Wolf Tietze had in mind, when he invited me to contribute this short paper. Thinking with pencil and paper about possible alignments, however, it became clear to me, that the Near East was no more extension of Europe but has priorities of its own. Geopolitics have changed though. An axis from Berlin to Baghdad does not make sense anymore. While in the old days of the caravan-trade the Near East was the crossroads to the world, this is not so any longer. Today the countries of the Near East have to be seen as individual destinations and not as mere transit corridors.

2. GENERAL CONSIDERATIONS

The Transrapid may be one of the big innovations in transport during the next century. It provides a better solution for well known tasks and as an innova-

tion has therefore to push aside railway traffic, highway transport and air-services. Competition will be stiff as all other transport-institutions will mobilize their lobbying-power against it and their potential for incremental innovation as well.¹ Just what the advantages of Transrapid will ultimately be we cannot be too sure. It will be swifter or more comfortable than the competitors or even both. But is that enough to make it an economic success? It will not necessarily be cheaper, all things considered, than airplanes. In developed countries like Germany the chances can be discussed with a view on the many bottlenecks which the prevailing transport modes have to face. In less developed countries many of those bottlenecks do not exist. Road and air transport can be managed more flexibly and be adapted to local, regional and even national needs. Already in the 1980 Turkey had a nationwide Bus-system functionally superior to the costly Intercity trains of Germany.² Railways in developing countries are usually highly inflexible, unefficient and slow. It should be easy to replace them by Transrapid. But this is not so with road and air transport, which in the case of the Near East seem better adapted and adaptable to Near Eastern societies and economies.

In order to highlight this we can state that all railway-systems in the Near East have been qualified failures.³ This ought to be a warning for optimists! Even the modern and functionally excellent national railway-network of Syria is but little used. Passengers and freight bypass it. Being under-used signs of neglect have already appeared and it will be technically outdated within a short time. Eventually it will be run down through lack of maintenance and less important lines will fall out of use. There are many reasons for it. Some of them will have to be considered anew when a still more sophisticated transport System like Transrapid is to be introduced.

Railway rides are expensive for people with low means and the mass of the inhabitants of Near Eastern countries are still too poor to afford comfort in trains. For inland trips buses and collective taxis better fit their needs. Recreational travelling is mostly done in family groups for which a private car or a taxi will be

still more economic and comfortable. Now Transrapid is always presented by its promotors as travelling at high speed with high comfort and for high prices. This would be a wrong way to promote it in the Near East. It should be high speed alright but with only a little more comfort than the economy-class in airplanes at a price not so very much higher than a seat in a collective Taxi.

I doubt that tourists will pay better prices for more comfort. Otherwise the first-class compartments in our trains should be better filled.

Cross-border travelling in the Near East is till a complex and lengthy affair. Governments are notoriously suspicious of their neighbours and their subjects, worse than anywhere in the world. It took our party seven hours to cross the Jordan-Iraqi border in 1994, although both countries are on friendly terms. This can in no way be compared to Europe where borders have become of no consequence and Transrapid trains would not now be held up for any length of time.

There is in the Near East no real tradition of goods-traffic on rail. If it exists at all it is in bulk-goods. Usually it serves nationalized or state-held companies whom the government can oblige to use the rail. Generally trucking comes much cheaper. The general manager of the Hasa phosphate mine bitterly complained in 1988 that his company had a long term treaty with the government of Jordan for the sole use of the Hijaz railway. True, the southern part of this track had been reconstructed at a high cost and given an outlet in Aqaba just for the benefit of that mine. Most normal freight is shipped on trucks owned by small transport companies and this mode of forwarding better fits the prevailing small-scale industries and trading companies. Mutual trust between business-partners is an essential factor for profitable transactions in the Near East. But who can really trust a government organization like the railway?

Also, rail transport suffers from its technical dependency on foreign industrialized countries. Locomotives as well as most of the essential material and spare-parts are not produced in the Near Eastern countries. Overhauling and maintenance often depend on foreign technical expertise. Though it is possible to continue low-speed rail-traffic without much repairs for a long time, and Sudan railways are an example, for a high-speed system like Transrapid technical maintenance cannot be delayed. As against that trucks and buses can be repaired just where they have broken down in the field and airplane maintenance is done at airports and not hindered by any interruption of tracks.

Lastly, the volume of traffic between the individual countries is not very high. An analysis of the international air-services in the Near East will show that the capital cities have their main links to places like Lon-

don, Paris, Frankfurt, New York, and Singapore so on and not to the cities in neighbouring countries. Not infrequently a flight between two of the Arab countries will have to run fastest via London or Paris.

Many of these reservations would show up immediately when it came to planning a Transrapid network. It is bound to be still more in the hands of individual governments, still more vulnerably to technical neglect, demanding a lot of control and security measures. Therefore, long-range transit traffic will be difficult to organize. Such routes will perhaps not be the first choice.

In sea transport the Near East presently profits from the alignment of the world-container-Main. This route runs through the Mediterranean, the Suez Canal and the Red Sea on its way between Western Europa and Asia. The Levant, parts of the Arab peninsula and the Gulf of Oman have excellent access to it. This is one of the reasons why direct trucking of import-goods down from Europe – once called the “trips into the sands” – have shrunk in recent years despite a significant improvement of the road-networks. Our globalizing world has a maritime structure and it will be a hard task to bring freight back unto the land routes.

Let me add for good measure that Transrapid or any high-speed surface transport-system shall need peace and public security throughout the area served by it. Once upon a time Lawrence of Arabia has demonstrated that a railway track of some length cannot be made safe by military means alone. Only optimists can expect that such a measure of peace will be guaranteed throughout the Near East within the coming 30-50 years.

3. GEOGRAPHICAL VIEW OF THE PROBLEM

For a hypothetical Transrapid-network in the Near East we need not bother much with physical features such as mountain ranges or sandy deserts. Transrapid is adaptable to them and if there is a need they will be traversed. For this same reason there is no need to consider the geographic alignment of ancient trade-routes or actual roads and railways, except perhaps that a high-speed track will always need a servicing road parallel to it. Transrapid can take routes which had to be avoided formerly for their physical and climatic difficulties or for the lack of water-places en route. Speed makes it possible to take detours without unduly lengthening travelling time.

On a national scale Transrapid is a means to link the two most important cities of a country. These will be the first tracks that can be financed. When it comes to planning, an international network links between

the biggest cities of several million inhabitants will come first with their potential for passenger generation and their massive needs to import or to ship manufactured goods. To the giant cities like Cairo, Teheran, Ankara and Baghdad we can add the capitals of the various states. Any government will insist on their being served by the network. Passengers will, to a large degree, change over to an available Transrapid-line at international airports. Lesser cities, below one million inhabitants and not served by busy international can be left out. For a network in Europe some cities with only about 200.000 inhabitants could be included as nodes or destination⁴, but this size quite certainly is too small in our region; today and also in the future.

The second type of places to be considered are sea-ports. Think here of future container main-ports and not of smaller national ports. Only such main-ports attract the regular container services plying the intercontinental and round-the-world routes. From such main-ports container-loads or smaller parties are trucked to inland cities or feedered in smaller crafts to coastal places off the mainroutes. Such feedering and transshipment has made the fortune of Dubai. At present only this city and its technical satellites in Sharjah, Jabal Ali, Khorfakkan and Fujairah constitute a full-fledged main-port. Jeddah in Saudi Arabia is set to become one. The future will bring such a port at Bandar Abbas or Qishm in Iran, as a node also for transports into Central Asia. Masqat in Oman and Aden will rather qualify for transshipment only.

Two main-ports seem likely to emerge in the Eastern Mediterranean. One will be near the northern entrance of the Suez Canal where some unloading and transshipment is done already in Damietta (Dumyat). Adana, that is some place like Ceyhan near it, is the second candidate. It will serve eastern Anatolia, western Iran and Kaukasia. For regular container-lines the trip into the Black Sea is too time consuming a cul-de-sac.

Providing a European Transrapid-network that has been extended to Ankara in Turkey, this city will be half a day from Frankfurt in Central Europe. Total travelling time for passengers can be shorter in fact than by airplane within this range of distances. Long check-in times and waiting at airports can be avoided as well as cramped conditions on economy flights. Baghdad and even Cairo might be within one day's reach. For the Arab peninsula and Iran direct air services to the European metropolises shall be more convenient and will probably come cheaper.

Similar considerations regard express and very urgent goods. The present operators in this field like FedEx, UPS, TNT run their own flights to important destination and offer delivery within one day or at maximum two. They can do so because they do the

groundhandling and most of the forwarding and delivery themselves. This is their business edge and too much confidence in a public transport system should make their services unreliable.

Normal parcel freight, that is manufactured goods, will arrive on container-ships and be distributed from the main-ports. A Transrapid link will be used if it is convenient and not too expensive. Therefore the direct links from the main-ports to inland capitals become of great importance.

4. PROPOSAL FOR TRANSPRAPHIC ROUTES

Keeping in mind what has been said above tentative alignments can be sketched for Transrapid without the danger of being misled by undue optimism or too much cautiousness. There are six main-routes and several interesting alternatives. Possible feeder lines are mentioned only occasionally (Figure 1).

1) *The Transarabian Link*: Of all the countries in the Near East, Saudi-Arabia is the most likely one to start with an independent project for a Transrapid or a similar high-speed system. It probably has also the financial means to build it. Incomes are high enough for the people to afford travelling and the passenger movement is strong already, even forgetting about the pilgrimage to Mecca. There is a need to make the capital Riyadh accessible from the ports at Jeddah and the Red Sea and Dammam on the Arabian Gulf. As yet, only road and air transport are available. The modern rail-link between Riyadh and Dammam covers a third of the distance only. Moreover, this would be a national project with no other government involved. The track from Jeddah would run to Mecca and then in an almost straight line to Riyadh and to Hofuf. Dhahran airport would be a logical eastern terminal, but extensions to Dammam and Al Jubayl ports can be useful. Such a project can be started immediately and perhaps will be, once Transrapid has been able to prove its usefulness somewhere else in the world.

Plans for a transarabian link should immediately call for an extension eastward into the United Arab Emirates and into Oman. Abu Dhabi, Dubai and Masqat/Matrah, eventually the port of Sur are possible destinations here. As these countries are well able to provide finance and are members of the GCC (Gulf Co-operation Council) political difficulties can be overcome without much delay.

2) *A Teheran-Gulf-Route*: The general situation is similar, although Iran is by far less affluent than the Gulf countries. The capital Teheran is awkwardly located from a transport point of view. The port of Bander Abbas will in due time become the principal outlet and import-place of the country and it is well situated for a

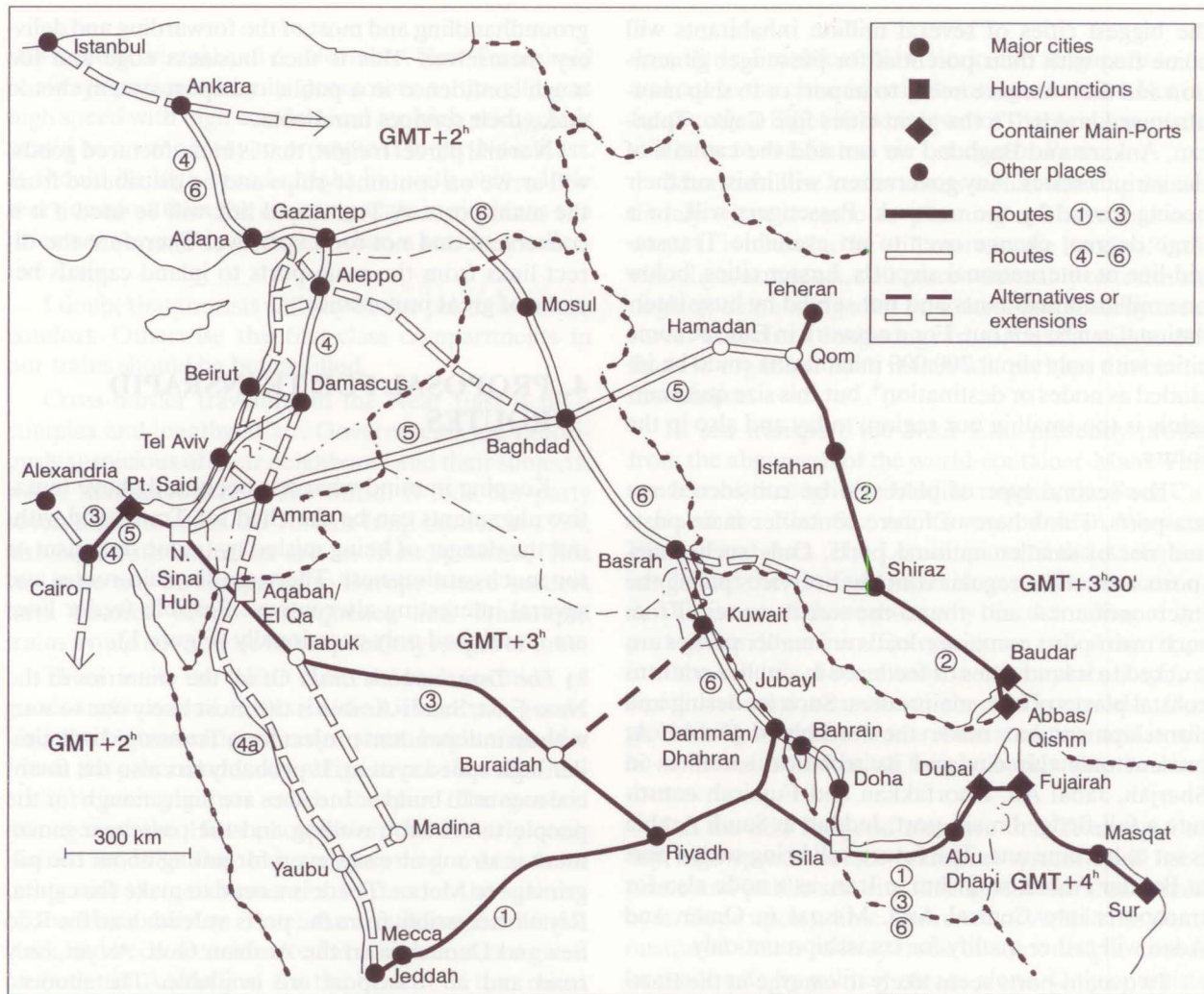


Figure 1 - Major Transrapid Routes proposed for the Near East

container main-port on the northern coast of the Gulf. The alignment can be Teheran-Qom-Isfahan-Shiraz-Bandar Abbas. I shall not dwell on possible extensions yet. A convenient modern transport-route does not exist on this route to the east of Isfahan.

3) *A New-Tapline-Route:* The pipeline from Saudi Arabia to Lebanon is long closed but the Tapline-road is still much in use for imports to the Gulf Countries. It provides access to Jordan and avoiding Israel to Mediterranean ports and to Turkey. A new Tapline-route will be useful for Saudi-Arabia and Kuwait as well as the other countries. The alignment might start from Riyadh (on the Transarabian Link and run through Buraydah – Hail-Tabuk to Aqabah in Jordan. Supposing the problem of crossing through Israel can be solved it should continue to a hub in Northern Sinai and go from here to the container port near Suez and ultimately to Cairo. Kuwait could be connected by a separate track to Buraydah or Hail.

4) *The Ankara-Levant Route:* It appears obvious to foresee a link between Ankara and Cairo, but this one

will be beset with the most tricky geographical and political problems. The first part to Adana and the container-port in this area is preferential for Turkey, eventually to be continued into southeast Anatolia. The southward leg is uncertain. A track along the coast down to Egypt should have to go through the densely urbanized areas of Beirut and Tel Aviv. An inland alignment from, say, Gaziantep to Aleppo – Damascus and Amman should leave out the coastal agglomerations and require additional links. Perhaps it should be better to foresee a route from Damascus through Nazareth into the coastal plains and on to the North Sinai hub where it could meet with the New Tapline Route to Cairo and Alexandria. At any rate, many wishes remain unfulfilled but none of the countries will have the means to put up all desirable lines.

Eventually, an extension along the Hijaz to Jeddah and Mecca via Aqabah and Tabuk is to be considered too, either on a coastal alignment or touching Medina.

5) *The Cairo-Baghdad-Teheran line:* It would run from Cairo (Alexandria) through the container port near

Port Said and the North Sinai hub continuing via Beersheba and Jerusalem to Amman. From here it can go either directly to Baghdad or make a detour north to Damascus. East of Baghdad it can run through Bakhtaran, Hamadan and Qom to reach Teheran. It thus links the biggest cities in the Near East, all of them being far removed from any container ports and thus likely to need improved transport services in the future. Political problems shall await settlement.

6) *The Baghdad and Gulf route*: Geopolitic considerations that once were behind the plans for the Baghdad Railroad have no importance today. When it comes to a planning process the countries involved will have divergent national priorities. Turkey might favour the route via Gaziantep to the Southeast Anatolia project. Iraq will need a link between Baghdad and Basrah. Syria might be content only with an alignment from Aleppo along the Euphrates to Baghdad. All this, of course, depends on who provides the funds to be invested. To continue from Basrah to Kuwait and on into the Gulf region is an issue blocked politically for a long time still. It serves no real needs if the above mentioned projects come about for the main concern of the Gulf countries has to be their link to the Mediterranean and not to Europe. As far as Iraq is concerned and comes to terms with Iran, again it might opt for a line via Shiraz to Bander Abbas.

A link between Kuwait and Dubai is in the interest of the Arab Gulf states. It might from Dammam cross over the sea to Bahrain and Qatar and have a junction with the Transarabian Link near Sila in the Emirates.

5. FINAL REMARKS

For brevities sake no speculations shall be made on other alignments that might appear desirable. Any map can give such clues in abundance. So, I shall not talk about an Ankara-Teheran line or on routes into Kaukasia, either from Adana or from Teheran. Such projects are far in the future. It is better to keep in mind the innovative character of Transrapid as a means of transport. It is always useful to start an innovation where there is a real need and where the obstacles can be most easily removed. The right timing is a factor of success.

REFERENCES

- 1 Treated theoretically by the author in his book "Allgemeine Wirtschaftsgeographie, Munich/Germany 1991, p. 136ff.
 - 2 Treated in W. Ritter (see above) after an unpublished paper by Yasar Sahverdi (1986). The main routes of the nationwide bussystem are here compared with the railway network of Turkey (p. 245f).
 - 3 Most railways in the Near East were built in a time when social and economic conditions were not yet ripe. This is discussed in: Ritter, W.: Verbindungsfunktion und Ressourcenaufschliessung als Grundprobleme beim Bau von Eistenbahnen im Orient (p. 93-110). In: V. D. Hütteroth and H. Hopfinger (eds.): Frühe Eisenbahnbauten als Pionierleistungen. Neustadt a.d. Aisch 1993.
 - 4 For illustration see the map in Wolf Tietze (ed.): Transrapidverkehr in Europa. Geocolleg 11; Stuttgart 1998.
- * Place names are written in the spelling prevailing in English publications.