



String Transport System

Proposed for Russia

An international project to improve communication infrastructure using the String Transport System is being considered by the Russian Federation. The String Transport System (STS), invented by Anatoly Yunitsky of the research centre UNITRAN, is a rope-and-beam construction using electromobles with a carrying capacity of up to 10 passengers and 5000 kgs. It receives electric power through the wheels which are in contact with the current-carrying heads of special rails.

The STS' optimal velocity ranges from between 300 and 400 km/hour. Traffic control is computerised, thereby reducing human error, which makes this a safe form of transport. In the long run, it is also a cheaper form of transport. The cost of a seven-hour trip to Paris from Moscow, for example, would only cost US\$ 32 per passenger, much less than the cost of an air ticket.

The proposed STS is also more efficient in terms of technical and economic indices than the high-speed railways of France, Germany and Japan. STS, suspended on piers 10 to 50 metres high, can easily avoid embankments, bridges, etc. and therefore reduces construction costs by up to five times.

Most importantly, STS is environmentally more sustainable because:

- It does not use non-renewable energy sources such as oil, coal, gas, non-ore materials and ferrous and non-ferrous metals, as its structure and supports have a low degree of material consumption.
- It uses electricity, which is one of the cleanest and cheapest sources of energy. In addition, ecologically-clean sources of energy, including wind and sun, will be used for the operation of STS roads.
- Fertile soils will not be affected very much, as the construction of a string road does not require tunnels or cleared-up spaces.
- In terms of exhausts, the STS is expected to produce less than 0.1 grams per passenger-kilometre, compared to 10 grams per passenger-kilometre for cars, 0.6 grams per passenger-kilometre for high-speed railways and 300-400 grams per passenger-kilometre for airplanes.

The main "problem" with introducing this system is that it requires heavy investment in the initial stages: To be implemented, STS would require at least one billion US dollars over a five-year period. But these initial start-up costs have to be weighed against the economic and ecological benefits of this means of transport.

The above article is based on a submission by V.K. Storchev, Head of the UNCHS (Habitat) Moscow Bureau. Some of the information was extracted from an article by Vladimir Sosnitsky entitled "The Road to the 21st Century", published in *Eureka*, No.3 1998.

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CONTENTS

EDITORIAL	2
LETTERS	3
INTRODUCTION	
<i>The Missing Link</i>	1
by Brian Williams	
FORUM	
<i>Driving Ourselves to Death</i>	6
by Matthew Nichols	
<i>Paratransit: The Gap Fillers</i>	8
by Robert Cervero	
<i>Catching the Wave</i>	10
by Colin Palmer	
<i>Improving Access to Urban Roads</i>	11
by Jo Leyland and Wilma van Esch	
<i>Breadwinners, Homemakers and Beasts of Burden</i>	12
by Deike Peters	
REGIONAL PERSPECTIVE	
<i>Urban Transport in Sub-Saharan Africa</i>	15
by Xavier Godard and Hubert Ngabmen	
<i>Carriers of Culture</i>	16
by Nana Apt, Jeff Turner and Margaret Grieco	
<i>Bicycle Taxis in Western Kenya</i>	18
by Peter Njanga and Jeffrey Maganya	
<i>The Transport Crisis in Cairo</i>	19
by Hossam Abd Raboh	
<i>Hurdles to Easing Transport Congestion in Asia</i>	20
by Walter Hook	
<i>Improving Air Quality in Delhi</i>	22
by Madhav Badami	
<i>Cleaning Up the Skies in Santiago</i>	23
by Chris Zegras	
<i>Curitiba: A Replicable Best Practice?</i>	25
by Tony Plumble	
<i>String Transport System for Russia</i>	26
by Vladimir K. Storchev and Vladimir Sosnitsky	
<i>The Benefits of Investing in Public Transport</i>	27
by Pierre Laconte	
CASE STUDY	
<i>One David and Three Goliaths</i>	28
by Sheela Patel and Kalpana Sharma	
VIEW POINT	
<i>Is Privatization Really the Answer?</i>	30
by Dominic Spaethling	
PARTNERS UPDATE	31
HABITAT NEWS	33
VIDEOS	36
PUBLICATIONS	37
CALENDAR OF EVENTS	39
UNCHS (Habitat) OFFICES	40

