

***RUSSIAN FAR EAST TRANSPORTATION ASSESSMENT***

Gene C. Griffin  
Upper Great Plains Transportation Institute  
North Dakota State University

Dennis McLeod  
Red River Valley and Western Railroad  
Wahpeton, North Dakota

June 1998

## Table of Contents

|  |    |
|--|----|
| Russian Far East Transportation Assessment ..... | 1  |
| Basic Impressions .....                          | 1  |
| Recommendations .....                            | 4  |
| Justification .....                              | 6  |
| Initial Steps .....                              | 7  |
| Education .....                                  | 7  |
| Research .....                                   | 7  |
| Training .....                                   | 8  |
| Conclusion .....                                 | 9  |
| Visit Schedule .....                             | 10 |
| Protocol of Intention .....                      | 13 |

## **Trip Report**

### **RUSSIAN FAR EAST TRANSPORTATION ASSESSMENT**

This report is a summary of the impressions, as well as the recommendations, drawn by Gene Griffin, Director, Upper Great Plains Transportation Institute, North Dakota State University, and Dennis McLeod, President, Red River Valley & Western Railroad. These impressions and recommendations are based on an eight-day site visit to the Russian Far East, April 19-27, 1998 (see attached itinerary). The overall purpose of the trip was to assess the need and opportunities to develop training and education programs, which would help transportation managers, business, and government officials adjust to a free market environment, and the Far Eastern State Transportation University educate and train transportation professionals to function in this new business environment for Russia.

#### **Basic Impressions**

The technical capability and expertise of rail management for the Far East Railroad seems to be more than adequate and an obvious strong suit of the railroad. There was strong evidence of a high degree of engineering expertise and its applications within the railroad. Furthermore, the Far Eastern State Transportation University (FESTU) has excelled in technical disciplines of rail operations and adequately prepares students for this aspect of the rail industry in the Russian Far East, as well as in other parts of Russia. However, some weaknesses exist in other aspects of transportation in the Russian Far East.

There seems to be a lack of understanding and/or appreciation of the role of a multimodal transportation system in the region's economic and social development. The interdisciplinary

nature of transportation also appears to not be recognized. The transportation infrastructure is terribly underdeveloped for all but the rail mode. Highways are developed on a limited basis and are of poor quality. In addition, the capacity of the highway system is limited. Rural roads are virtually nonexistent and the quality of the minimal system that does exist is extremely poor. This appears to stifle development of the region's natural resource base, including agriculture. It also limits networking of businesses and people in the region except within the individual population centers. Most importantly, it results in a near monopoly situation for the rail mode. There appears to be no competition to impose discipline on rates, service, operating costs, or investment.

The rail mode is so well developed, it possibly has redundant infrastructure and is overcapitalized. Assets seem to be underutilized. This raises the question of increasing traffic levels or divestment. Examples include overbuilding of the signal systems in the yards, possibly the electrification, maintenance facilities, and double tracking.

Transportation professionals who manage the Far Eastern Railroad are technically capable by U.S. standards. However, they appear to lack business management knowledge and skills, and are not trained or educated in this area of study. They are well qualified to run a railroad, but not a business, as they appear to be where U.S. rail management was 20-30 years ago. Business is second to ensuring that the train is running up and down the tracks. There was some evidence at the seminars that middle management, i.e., younger managers, were quite receptive to free market business principles.

Additionally, rail management lacks the prerogative to set rates and service levels to stimulate production, meet competition, or increase efficiency. Moscow seems to have a strong influence and control on this aspect of business management. This is a significant problem that

would seem to stifle the ability of railroad management to adjust to a market driven business environment. It also appears that the budgeting process emanating from Moscow stifles cost efficiency.

Horizontal integration appears to dominate the thinking of management. This results in redundant capacity sitting idle and the underutilization of scarce capital. This inclination for horizontal integration may be driven by a desire for control or the perception that reliability of vendors makes outsourcing impossible. Regardless, this striving for self sufficiency seems to have resulted in a broad, far-flung operation with the usual attendant inefficiencies. Even presuming that the inefficiencies do not exist raises more questions. Does such a business environment diminish the organizations' capability to focus on their core business? Does it restrict the amount of capital available to invest in its core business and does it limit the necessary research to maintain a technologically-advanced system? This also relates to the social institutions they maintain, such as housing, etc., but it is essentially a separate issue.

FESTU has a tremendous opportunity to play a vital role in the development of a transportation system that could greatly enhance the development of the region, economically as well as socially, through the development of human capital and the advancement of knowledge. The following recommendations are developed to focus on those two goals. However, the first step for FETSU should be the articulation and adoption of a vision and mission that provides the direction necessary for being effective.

## **Recommendations**

Four basic recommendations based on the impressions gained from the site visit are summarized as follows:

1. Development of a training program that addresses the immediate needs of existing transportation professionals. Training programs and associated courses should be developed to provide current transportation rail management, territorial transportation planners, economic development professionals and business entrepreneurs, with the knowledge necessary to address the current economic issues. In the beginning, the programs should reflect immediate transportation needs of the region and should include rail management. Initial topics could include industrial organization, competition, pricing, cost accounting, rail costing, management information systems, strategic planning, and efficiency. Programs in regional transportation planning and intermodal transportation also should be developed.
2. Academic training of Russian Far East students who are interested in transportation at U.S. universities with a transportation program. The future transportation leaders and managers should be exposed to an academic background broader than the technical program currently offered at FESTU. Students also will need advanced degrees if they hope to achieve the level of sophistication and understanding necessary to take advantage of the existing worldwide level of knowledge and technology. The students should obtain advanced degrees in business, planning,

operations research, and economics. They should also pursue knowledge in the *advanced transportation systems* technologies and applications.

3. Development of a joint research program between FESTU and the American universities involved in the academic training of Russian Far East students. Several opportunities exist to develop joint research projects between American universities interested in transportation and FETSU. These joint opportunities would rely on the involvement of graduate research assistants from the Russian Far East. The projects would be driven by the source of the funding, but should relate to opportunities in trade for both countries or have academic value sufficient to justify their pursuit.
4. Broadening of the *Far East State Transportation University* academic program. The current program should be developed to reflect the interdisciplinary and multimodal nature of transportation. The university's program should reflect the transportation needs of the region which are necessary for social and economic development in the 21<sup>st</sup> Century. To achieve this they should expand to the different modes and include highway and rural road systems, intermodal, and air. It also is imperative that FETSU embraces and develops an interdisciplinary approach to educating transportation professionals for the region. This consists of including the disciplines of business, logistics, management, economics, planning, and operations research as they apply to transportation.

## **Justification**

Transportation is critical to the economic and social development of the Russian Far East. The current transportation system is characterized by one dominant mode, rail. The railroad that serves the Russian Far East lacks any intermodal or intramodal competition. The highway infrastructure network is almost non-existent by U.S. standards, and what does exist is not of sufficient quality to provide significant competition or real alternatives to shippers. Furthermore, current rail management is dominated by technical operating personnel with a lack of understanding and/or appreciation of the organization as a business. This problem is exacerbated by a lack of professional training for existing rail management. It also is possible that officials and businessmen involved in entrepreneurial efforts lack a good understanding of the importance and the relationship of business logistics to their efforts.

There is a lack of academic programs to address these problems. For example, the term Intelligent Transportation Systems (ITS) was completely foreign to individuals interviewed on this site visit. Also, staff and students were unaware of the term logistics or were only vaguely familiar with the concept. The academic areas of study of business management, business logistics, economics, and operations research with a transportation emphasis would be extremely beneficial in the adjustment to a market orientated business. FESTU appears to be extremely well positioned to fill this void for the Russian Far East region. It can become a center of excellence in transportation education and the development and delivery of transportation technology and knowledge. It also may extend its influence and contribution in this area to other parts of Russia as well.



## **Initial Steps**

### ***Education***

Enroll one to three students in the Master of Science in Business Administration or Master of Science in Agricultural Economics, with transportation emphasis within the next two years. Efforts should be made to attract at least one student next year, if possible, with the anticipation that the student would be hired by the UGPTI as a graduate research assistant to work on one of the proposed research projects. The project would be developed in to also allow involvement of an American graduate research assistant, thus improving relations among students and increasing credibility of the project in the Russian Far East and the United States.

### ***Research***

Initiate one or two joint research projects. Potential projects to be considered include: (1) evaluation of opportunities for container traffic through the southern ports of Vladivostok and Nakhodka, (2) evaluation of the need for a country road system in the agricultural area of Ussuriisk, (3) evaluate the need for and feasibility of establishing a telecommunications video conferencing system that would link FESTU campuses and other clients in the region, (4) evaluate the feasibility and value of intermodal *Intelligent Transportation Systems* applications in the container facility at the port of Nakhodka.

## *Training*

Three initial training courses should be developed for delivery in the Russian Far East within the next 18 months. Three potential projects of high interest were identified during the site visit: (1) Industrial Organization of the U.S. Freight Transportation Industries, (2) Regional Transportation Planning, and (3) Intermodal Transportation Planning and Implementation. Additionally, a business logistics and ITS workshop should be developed sometime in the future, and the use of telecommunications to facilitate training also should be explored.

## Conclusion

The trip culminated with the signing of a *Protocol of Intention of mutual cooperation* between the Far Eastern State Transportation University, Upper Great Plains Transportation Institute, American Russian Center, and the Red River Valley & Western Railroad (see attachment). The agreement spells out some of the suggested strategies in this trip report.

It should be made clear that the underpinning long term goal of any effort would be to assist the FESTU in becoming proficient in training and educating transportation professionals for the Russian Far East and other parts of Russia. That goal also includes assisting them in becoming proficient in conducting transportation planning, market, economic, and logistics research. Therefore, any effort that is developed would be viewed as a program of assistance and would be gradually eliminated after some level of proficiency had been achieved by the FESTU.

Funding for the beginning of this program is essential. The Upper Great Plains Transportation Institute, North Dakota State University, is willing to work with the American Russian Center, University of Alaska - Anchorage, to develop funding for the implementation of any of the aforementioned ideas that are feasible and have merit. If successful in this effort, the two universities, along with the collaborative effort of the Far Eastern State Transportation University will make an important contribution to the economic and social success of the Russian Far East and the development of the intellectual human capital of the region.

## Visit Schedule

### **04/19 Sunday**

17.35 Meeting at Airport

19.00 Hotel Check-in

### **04/20 Monday**

9.00 Breakfast in hotel

9.45 Depart hotel

10.00 Meeting with rector of FESTU

11.30 Seminar with university administrators

13.00 Lunch

14.00 Meeting with senior Far Eastern Railroad management

16.00 City tour

18.00 Dinner at hotel with Rector, et. al.

### **04/21 Tuesday**

9.00 Breakfast

9.45 Departure from hotel

10.00 Seminar for Far Eastern Railroad management

13.00 Lunch

14.00 Khabarovsk museum tour

19.00 Dinner with the general manager of the Far Eastern Railroad

**04/22 Wednesday**

- 8.00 Breakfast
- 8.45 Depart hotel
- 9.00 Meeting with vice governor of Khabarovsk Krai administration
- 10.30 Scientific work of FESTU
- 13.00 Lunch
- 14.00 Site visit to Amur River bridge reconstruction
- 16.00 Meeting with Russian American Center directors
- 18.00 Concert

**04/23 Thursday**

- 9.00 Breakfast
- 9.45 Departure from hotel
- 10.00 Seminar for faculty and railroad middle management
- 13.00 Lunch
- 14.00 Logistics seminar for students in American program
- 17.00 Hotel check-out
- 19.00 Departure for Vladivostok on FESTU rail car

**04/24 Friday**

- 6.00 Breakfast
- 7.00 Depart for Vladivostok by car
- 8.00 Meeting with Far East Rail management - Vladivostok region
- 9.30 City tour

- 12.00 Lunch with rail management
- 13.00 Depart for Nakhodka by car
- 17.30 Port tour of Nakhodka
- 19.30 Dinner at rail car
- 19.25 Depart for Ussuriisk by rail

**04/25 Saturday**

- 7.00 Breakfast
- 8.00 Meeting with locomotive repair shop management and tour of shop
- 10.30 Meeting with refrigerator car repair management and tour of facility
- 14.00 City tour
- 21.00 Departure for Khabarovsk by train

**04/26 Sunday**

- 7.30 Breakfast
- 8.30 Arrival at Khabarovsk
- 9.00 Hotel check-in
- 11.00 Closing meeting with the rector of FESTU
- 13.00 Lunch
- 16.00 Sports complex site visit and dinner

**04/27 Monday**

- 8.00 Breakfast
- 9.00 Depart for airport
- 11.25 Departure for Anchorage

**PROTOCOL OF INTENTION  
of mutual cooperation  
between Upper Great Plains Transport Institute of North Dakota State University,  
USA, Red River Valley & Western Railroad Company, USA, and the Far Eastern  
State Transportation University, Russian Federation**

**April 26, 1998**

**Khabarovsk, Russian Federation**

During their stay in Khabarovsk, the Director of the Transport University, North Dakota State University, Gene C. Griffin, and the President of the Red River Valley and Western Railroad, Dennis W. McLeod had negotiations with the Rector of the Far Eastern State Transportation University, Victor G. Grigorenko, the Administration of the Khabarovsk Region, with Managers of the Far Eastern Railroad, and with the Russian American Education Center (RAEC).

The parties which participated in the meetings expressed their sincere interest in establishing and developing academic, scientific-technical, and cultural ties between universities, railroads, and business people on a stable and long term basis, and for mutual benefit. The parties determined the most pertinent spheres of mutual interest:

- intermodal transportation operations, organization and management of freight operations with the interaction of different types of transportation;
- management of transportation agencies;
- regional management of transportation operations;
- strategic planning;
- the economics of freight transportation;
- logistics;
- the organization of transcontinental freight operations;
- business administration.

Director Gene Griffin, and president Dennis McLeod on the one hand, and Rector Victor Grigorenko and Director of RAEC Nancy E. Lurhar, on the other hand, further referred to as "parties", as a result of their meetings and negotiations, came to the following agreement on intentions of cooperation in the following spheres:

**1. JOINT EDUCATIONAL PROGRAMS**

- 1.1. Designing and implementation of bachelors and masters degree preparation.
- 1.2. Designing and implementation of joint educational programs for continuing education of managers, financial managers, engineers and technical workers.
- 1.3. Organization of short thematic seminars for students, railroad specialists, and scientific-technical workers.

**2. SCIENTIFIC-TECHNICAL COOPERATION**

- 2.1. Exchange of technical-scientific information, and information on organizational issues of railroad transportation management.
- 2.2. The development and implementation of training programs for managers and specialists of railroad transportation at corresponding organizations and companies in Russia and the USA.
- 2.3. Joint scientific research projects.
- 2.4. The organization of joint conferences, symposiums, exhibitions on actual problems of the transportation sector.

### 3. THE DEVELOPMENT OF CULTURAL TIES, MUTUAL UNDERSTANDING, AND EXCHANGES


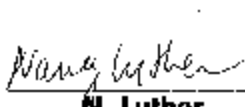
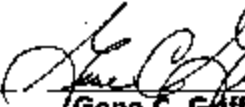
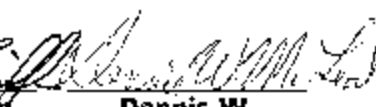
- 3.1. Support of trips for students, teachers, and scientific-technical workers from both universities for the purpose of fulfilling the goals in numbers 1 and 2 of this Protocol
- 3.2. Support of mutual trips of railroad specialists to Russia and the USA, for the purpose of exchange of expertise
- 3.3. Exchange of athletic and cultural delegations

The parties agree to the establishment of cooperation in agreement with the content of this Protocol, and they will work directly with each other, as well as through the American Russian Center, University of Alaska Anchorage, and its representative, the Russian American Education Center, at the Far Eastern State Transport University. In order to achieve their goals, the parties will actively search for grants from various foundations, submit offers and suggestions on the collaboration to the Pacific Northwest/Russian Far East Gore Chernomyrdin Commission Working Group.

The parties agree that this Protocol will serve as a basis for creating a working group for the purpose of preparing concrete agreements and contracts, as a mechanism for the realization of the above-mentioned intentions.

The Protocol has been prepared in 4 copies: 2 copies in Russian and 2 in English. All copies have the same legal authority.

#### The Protocol has been signed by:

|   |  |   |  |
|---|--|---|--|
| <br><b>Victor G. Grogorenko</b><br>For the Far Eastern State Transportation University,<br>Russian Federation | <br><b>N. Luther</b><br>For the Russian American Education Center,<br>Russian Federation and the USA | <br><b>Gene C. Griffin</b><br>For the North Dakota State University,<br>USA | <br><b>Dennis W. McLeod</b><br>For the Red River Valley & Western Railroad Company,<br>USA |
|---|--|---|--|