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**ECONOMIC COMMISSION FOR EUROPE**

**INLAND TRANSPORT COMMITTEE**

Working Party on Transport Statistics  
(Fifty-first session, 24-26 October 2000,  
agenda item 8(b))

Working Party on Rail Transport  
(Fifty-fourth session, 3-5 October 2000, agenda item 8(d))

**TRAFFIC CENSUSES IN THE ECE REGION**

**Draft Report of the Informal Working Group on Rail Census Methodologies**

**(13-14 June 2000, Geneva)**

**Note by the secretariat**

**ATTENDANCE**

The Informal Working Group on Rail Census Methodologies was held in Geneva on 13 and 14 June 2000. The following intergovernmental organizations were represented: Eurostat, the Trans-European Railway Project (UN/ECE/TER), Eurostat and the International Union of Railways (UIC). At the invitation of the secretariat, the Institute of Territorial Studies (IET) of Barcelona was also represented.

## **PURPOSE OF THE MEETING**

The secretariat opened the meeting, noting that the objective of the meeting was to explore the feasibility of carrying out an E-Rail Census along the lines of the AGC network. An eventual "E-Rail Census" would entail the collection of rail traffic data and infrastructure parameters according to a common methodology and would facilitate the processing and presentation of data, as well as allow for the automation and geographic application of the E-Rail Census. The GIS application of both the E-Road and E-Rail censuses in a harmonized database would allow for comprehensive multimodal spatial analysis, providing important information on the evolution of traffic and infrastructure development considered integral to effective transport policy planning and investment.

## **MANDATES FROM SC.2 AND WP.6 REGARDING E-RAIL CENSUS**

At its fifty-third session (6-8 October, 1999), the UN/ECE Working Party on Rail Transport (SC.2) had expressed its interest in studying the possibility of collecting data on train traffic on the AGC network, similar to that collected for the E-Road Census on the AGR, in order to have more comparable data among the rail and road sectors. Accordingly, it asked the secretariat to convene an informal group including the UN/TER PCO in order to draft a detailed data collection proposal to be examined at its next session (TRANS/SC.2/192, paras. 49-50).

This opinion was transmitted to the Working Party on Transport Statistics, the responsible body for carrying out the compilation of results from the E-Road Census, on its fiftieth session, to have their views. In order to study the feasibility of such an E-Rail Census, the Working Party decided to ask the secretariat to convene an Informal Working Group on Rail Census Methodologies, the results of which would be referred to the forthcoming sessions of SC.2 and WP.6 for further instruction on the possible development of an E-Rail Census and its GIS application (TRANS/WP.6/137, paras. 34-36).

## **COORDINATION WITH OTHER INTERNATIONAL ORGANIZATIONS AND TER/PCO ON DEVELOPMENT OF E-RAIL CENSUS**

The Working Group considered related work in this area at the UIC and Eurostat, at the Project Central Office for TER, and at the Institute for Territorial Studies (IET) in Barcelona.

### UIC

The representative of the UIC said his organization had developed a railway database (RAILISA) and a GIS which covered the AGC, AGTC, Crete Corridors, TEN Corridors and the TEFN corridors. For each section on the railway, the UIC said it had defined beginning and end points, length of tracks, minimum distance between axis, maximum gradient on each section and

type of signalization (e.g., manual, automatic, or ERTMS, a standard signalling system that would allow free circulation of trains in neighbouring countries); type of current, etc. and information on track superstructure, concrete sleepers, axle load, fastest journey times, maximum authorized speeds, lines used by tilting trains, express trains, number of trains per day. The last data was collected for 1998-1999, by means of a questionnaire to railways.

#### EC/Eurostat

The representative of Eurostat said that the European Commission had circulated a revised proposal for a new Legal Act on rail transport statistics which is expected to ask EU member states, on an annual basis, for data on, *inter alia*, statistics on traffic flows on the rail network (Annex G of draft legal Act), and statistics on railway accidents (Annex H). The Draft Regulation for Rail was presented in May to the Statistical Program Committee, to be adopted by the Commission, then presented to Parliament, then to the Council and expected to be officially adopted by 2001.

In particular, Annex G of the Draft Regulation would be relevant for the E-Rail Census, since it would ask EU member states for data on traffic flows on the rail network. The data was expected to be collected not only by Central Statistical Offices, but also using existing data. The basic idea would be to collect (through Annex G) the number of trains for goods transport and the number of trains for passenger transport by network segment every five years. It was acknowledged that the methodology to be used was not specified in the Directive (including the periodicity or the basis for the data, e.g., peak-hour traffic, etc.) but that it would be clarified once the Regulation was adopted.

*Based on the explanation of the data to be collected by Eurostat, the Working Group decided that, for the time being, it would not consider collecting data on railway accidents for the proposed E-Rail Census.*

#### UN/TER PCO

The Informal Working Group was informed about the Trans-European Railway database which included section-oriented data on railways, including 1200 sections in 16 countries, achieved through common agreements with TER countries as to what constitutes a section. The database also included data on bridges and tunnels. The representative of TER/PCO expressed the need for common definitions for "sections" to avoid confusion, but said that he thought the sections defined by TER would be too detailed to be used for an E-Rail Census. He suggested coordinating with UIC to compare sections and identify discrepancies.

#### IET

The representative of the Institute of Territorial Studies in Barcelona said that his organization had been responsible for the Geographic Application of the E-Road Census in 1995, and that he had also had the experience of digitizing the TEN railway network in 1990 for the Commission. Using the Digital Chart of the World (DGW) as a basis for the GIS dataset, he linked variables to

segments, including number of trains, using a 1:1000 scale. He noted that this was pre-privatization and at a time where obtaining data from railway enterprises was less problematic. He underlined the fact that GIS allowed a multi-layer database which enabled analysis of intermodality. He said the purpose of the 1990 railway was to show a comprehensive view of rail traffic in Europe for planning and analysis.

## **DECISIONS TAKEN BY THE INFORMAL WORKING GROUP**

### **Establishment of an Ad Hoc Meeting on a Rail Traffic Census on the AGC/AGTC**

1. The Informal Working Group recommended that SC.2 and WP.6 ask the Inland Transport Committee to establish an Ad Hoc Meeting on the Rail Traffic Census, following the general format of the existing Ad Hoc Meeting on the Road Traffic Census. To follow a parallel cycle with the Road Census, a newly established Ad Hoc Meeting on the Rail Traffic Census could meet every five years, beginning in 2003. The convening of a new Ad Hoc body could be proposed to the Inland Transport Committee at its sixty-third session (13-15 February 2001). The work on the Rail Traffic Census would additionally need to be added to the Programmes of Work of SC.2 and WP.6.

### **Draft Resolution on 2005 E-Rail Census and Inventory**

2. The newly established Ad Hoc Meeting on the Rail Census would be primarily concerned with two objectives: to Draft a Resolution on the 2005 E-Rail Census and Inventory for adoption by the Inland Transport Committee at its sixty-fourth session, and to prepare the Recommendations for Governments in carrying out the Census and Inventory. In the Resolution, Governments would be asked to inform the Executive Secretary by a specified date, of its agreement to implement the terms of the Resolution in establishing the necessary administrative or statistical frameworks for carrying out the Census. A proposed text for such a resolution could be submitted to the first session of the Ad Hoc Meeting on the E-Rail Census as an annex to its agenda.

### **Preparation of Recommendations for the 2005 Rail Traffic Census**

3. In a similar fashion as the Road Census, the Ad Hoc Meeting would be primarily concerned with the preparation of Recommendations to Governments on the E-Rail Census and Inventory. The Recommendations would be expected to include, *inter alia*, the following items:

Purpose and Usage of the E-Rail Census and Inventory;

Coverage of the E-Rail Census and Inventory (AGC and AGTC)

Design of the GIS database

Scope of the E-Rail Census and Inventory (variables to be collected) including information on rail traffic, and infrastructure parameters (compliance with AGC/AGTC parameters);

Comparability with E-Road Census / Feasibility of multimodal GIS (Road/Rail)

Compilation of data and mapping information in GIS database

**Proposed Variables to be Collected in first E-Rail Census (2005)**

4. The Working Group decided that the initial set of variables to be considered for collection in the first E-Rail Census (2005) would be the basic set of data on traffic and parameters on the AGC, as set forth in Annex 1 of the Convention. In addition, the eventual Ad Hoc Working Group on the E-Rail Census may consider also additional variables for future censuses, such as the following:

Infrastructure lines appropriate to high-speed rail  
Types of signalling (manual type, automatic type, in-cab signalization)  
Types of electrification  
Track gauge  
Fastest Journey time

**Cooperation with UIC**

5. Moreover, the Informal Working Group decided to enter into a cooperative agreement with the UIC to share data and build on the existing GIS databases of both organizations and to avoid duplication of efforts. To begin, UIC would send to ECE the sections determined for the rail network in its database and the ECE would compare this with the sections defined in the AGC.

**Transmission of the decisions to WP.6/SC.2/WP.24**

6. The Working Group decided that the Report of its meeting would be transmitted to SC.2 on its fifty-fourth session (2-4 October, 2000), and WP.6 at its fifty-first session (24-26 October 2000), respectively. The Secretary to SC.2 said he would ask his group to develop a list of Focal Points for the appropriate person to carry out such a Rail Census. In addition, the Working Group would transmit the Report to UN/ECE Working Party on Combined Transport to encourage WP.24 to shift the timing of its data collection efforts on the AGTC to correspond with that of the AGC (E-Rail Census). If endorsed by WP.6 and SC.2, the two groups would then ask the ITC to establish the Ad Hoc Meeting on the E-Rail Census with the above-mentioned mandates.

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Annex

**UN/ECE Informal Working Group on Rail Census Methodologies  
(13-14 June 2000, Geneva)**

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