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REPORTS BY DIVISIONS AND GOVERNMENTS ON THE SITUATION IN THEIR  
REGIONS AND COUNTRIES AND ON PROGRESS IN THE STANDARDIZATION  
OF GEOGRAPHICAL NAMES SINCE THE FOURTH CONFERENCE

Scientific principles applied in the conversion on scripts

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The first U.N. Conference on the Standardization of Geographical Names in its Resolution 9 has recommended "that efforts should be made to arrive at an agreement on a single romanization system, based on scientific principles, from each non-Roman alphabet or script, for international application". (U.N. document E/CONF. 55/3, 1978, p. 12.)

The UNGEGN agreed at its 12th Session in 1986 that "the words 'scientific principles' in Resolution 9 of the 1st Conference needed clarification". (U.N. document ESA/RT/C/GN 10, 1986, paragraph 40, p.10.)

The word "scientific" has many meanings. For our purpose we best use definition nr. 4 at the Shorter Oxford English Dictionary which runs as follows: "Of an art, practice, operation, or method: Based upon or regulated by science, as opposed to more traditional rules or empirical dexterity". A further question is, by what kind of science in the sense of systematic and formulated knowledge the principles of romanization should be regulated.

It is linguistics, the science of language, and within it in the first place the study of scripts and in the second place phonology as the study of the phonemes of a language regarded as a system or structure. But some scholars regard the study of script as a special subject attached to linguistics on practical grounds only.

The fundamental requirement of a scientific treatment of romanization is the knowledge of the script and phonology of the source languages as well as of the target languages concerned. First of all we must know which phonemes or sequences of phonemes are represented by the letters (of alphabetical writing systems) or characters (of syllabic and logographic writing systems) of individual languages. The scientific principles to be applied in the conversion of non-Roman scripts or alphabets can be defined in general terms only:

The conversion, either transcription or transliteration, must be consistent, methodically structured and without ambiguities or contradictions.

As the exigencies of international cartography are concerned, some special requirements and points may be considered.

- (1) Simplicity of graphemic representation.  
Russian Ш = šč (Russian cartographic transliteration) is shorter than English shch, French chtch or German (popular transcription) schtsch.
- (2) Pronounceability.  
Russian Ш = šč and Я = ja (Russian cartographic transliteration) give a better indication of pronunciation than š and â (General COMECON standard).

- (3) Transliteration/transcription.  
For the Romanization of alphabetical non-Roman writing systems transliteration is generally preferred to transcription although the requirement of pronounceability often prevents a strict one-to-one conversion. See (2).
- (4) Uniform treatment of a non-Roman script, yes or no?  
The uniform treatment of a non-Roman alphabetical writing system disregarding the peculiarities of the individual languages using it is regarded an advantage for mechanical script conversion but not ideal for geographical names. Cyrillic Ш = Ш (General COMECON standard) disregarding the source language is for cartographical purposes less suitable than the differentiation Russian Ш = sc (Russian cartographic transliteration) and Bulgarian Ш = st (Bulgarian standard).
- (5) Transliteration alphabet.  
The letters of the Latin alphabet (inclusive the later addition v) plus the letters j and w constitute the fundamental stock of the Roman script which later has been enlarged by special letters and letters with diacritical marks.  
As many of these letters are pronounced different in the various languages of the Roman script area transcriptions and transliterations provided for national use may differ, which is a great hindrance in achieving at an internationally acceptable conversion key. For a universally acknowledged romanization a solution should be attempted which is neutral to the individual languages of the target script.
- (6) Regard of the various requirements are not allowed to destroy the consistency of any romanization system although clashes may sometimes not be avoidable.

### Summary

The paper first gives a definition of what is understood by "scientific principles". As regards the conversion of non-Roman scripts or alphabets, the application of scientific principles means that the conversion - either transcription or transliteration - must be consistent, methodically structured and without ambiguities or contradictions. The special requirements of script conversion for the purpose of international cartography are discussed.