



**ICA Commission on
Map Projections**

**8th Cartography and Geoinformation Conference
Zagreb, 2012**

Report about the ICA Commission on Map Projections

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ICA Commission on
Map Projections

Operational Plan 2011-2015

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ICA Commission on
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Who we are?



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Terms of Reference 2011–2015

**Proposed by M. Lapaine, Chair
E. Lynn Usery, Vice Chair**

Approved by the ICA General Assembly, Paris, 2011

Followed by the Operational Plan 2011-2015



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Operational Plan 2011–2015

- 1) The Operational Plan has to acknowledge the Terms of Reference and will be used to set achievable targets for CMP for a four year period.**

CMP web site was set up in 2011 and is maintained

<http://ica-proj.kartografija.hr>



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- 2) Promote and foster research on map projections, coordinate systems, transformations and conversions, and disseminate the outcomes at all CMP meetings.**

**Expected result: an enhanced set of online bibliographic tools and web links on map projections, coordinate systems, transformations and conversions
– deadline ICC in Rio de Janeiro 2015**



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3) Sessions and meetings – proposed places and dates:

Albena, Bulgaria, June 18-22, 2012, CMP session as a part of the 4th International Conference on Cartography and GIS.

Columbus, Ohio, USA, September 16-18, 2012, AutoCarto 2012, ICA special session on map projections.

Vienna, Austria, November 19–23, 2012. "The influence of SOA on Map Production and GeoBusiness" organized by ICA Commission on Map Production and GeoBusiness.



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3) Sessions and meetings – proposed places and dates (Cont.):

Dresden, Germany, August 25–30, 2013, ICA ICC

USA, place and date in 2014 to be determined. AutoCarto 2014, ICA special session on map projections; workshop on map projections

Croatia, place and date in 2014 to be defined.

Rio de Janeiro, Brazil, 2015, ICA ICC.



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4) Promote the proper use of map projections at all levels of education.

1st task:

Prepare a publication on map projection choice. First report in Albena, June 2012, final report and manuscript ready for print in Vienna, November 2012.

2nd task:

Prepare a textbook on map projections as it will be requested by ICA WG for the International Map Year scheduled for 2015.



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- 5) **Study terminology on map projections and prepare the multilingual dictionary for this area of cartography.**

Continuation of the project initiated by the Commission in the previous period.



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- 6) Provide consultative support in relation to map projections when required.



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- 7) **Last but not least – work for reaching the general aims conceived in the ICA Statutes taking into account the recommendations of the ICA Executive Committee**

Collaboration with the Croatian Cartographic Society:

- **ICA has two new interactive web maps**
- **Produced in Winkel projection and replaced the old ones made in Mercator projection**
- **The result is visible at the ICA website**



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Proposal to ICA EC to establish a Working Group or a Project Team on ICA visual identity (VID).

- **The VID should be a small group of ICA members including a graphic designer**
- **The aim of VID would be to analyse the current ICA visual identity and propose a new one including logo, memorandum, envelopes, web-site, ICA News, ICA publications, ICA flag, ICA tie, ICA pin, ...**



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Map Projection Choice

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According to the Operational Plan 2011–2015

- **Promote the proper use of map projections at all levels of education.**

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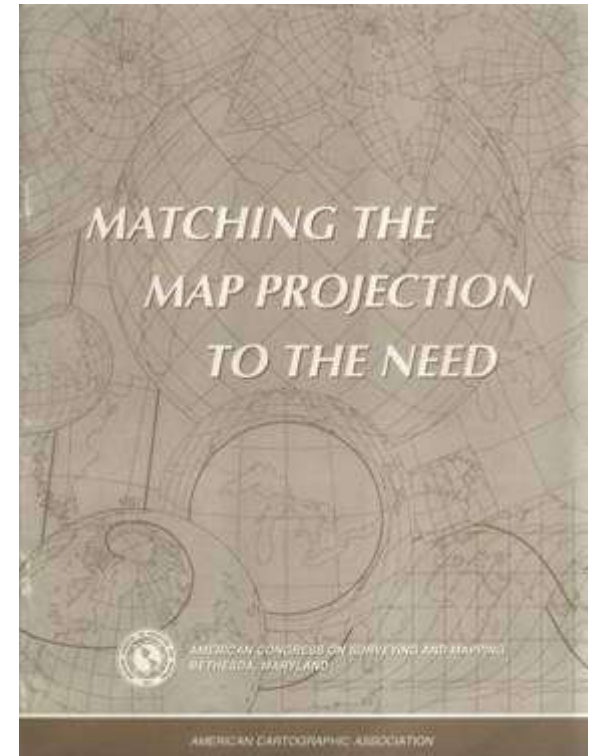
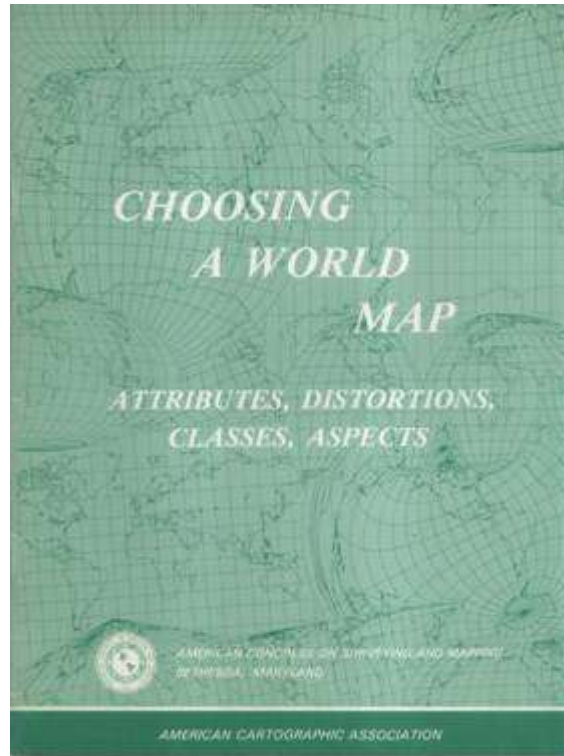
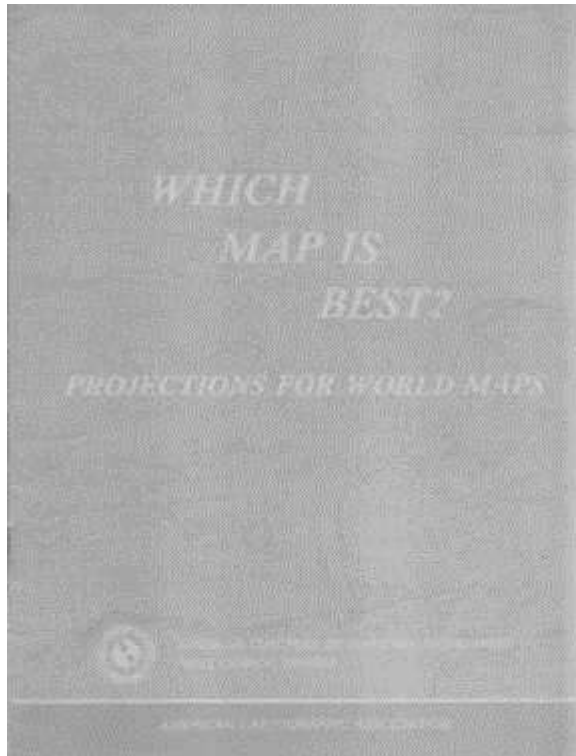
One can find a display of a great variety of map projections from which the choice of a particular map can be made.

A well-chosen map projection takes care that “extreme distortions are smaller than those in any other projection used to map the same area” and that map properties match to the purpose of the map.

Yet, a map projection may have none of these general properties and still be satisfactory, or it can be widely used despite being considered a poor choice for a particular map.



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COMMITTEE ON MAP PROJECTIONS

James R. Carter
Marshall B. Faintich
Patricia Caldwell Lindgren
Barbara B. Petchenik
Arthur H. Robinson
John P. Snyder, Chairman

TEXT AND DESIGN

Arthur H. Robinson

COMPUTER PLOTTING OF PROJECTIONS AND COASTLINES

Waldo R. Tobler

PREPARATION OF GRAPHICS

University of Wisconsin Cartographic Laboratory



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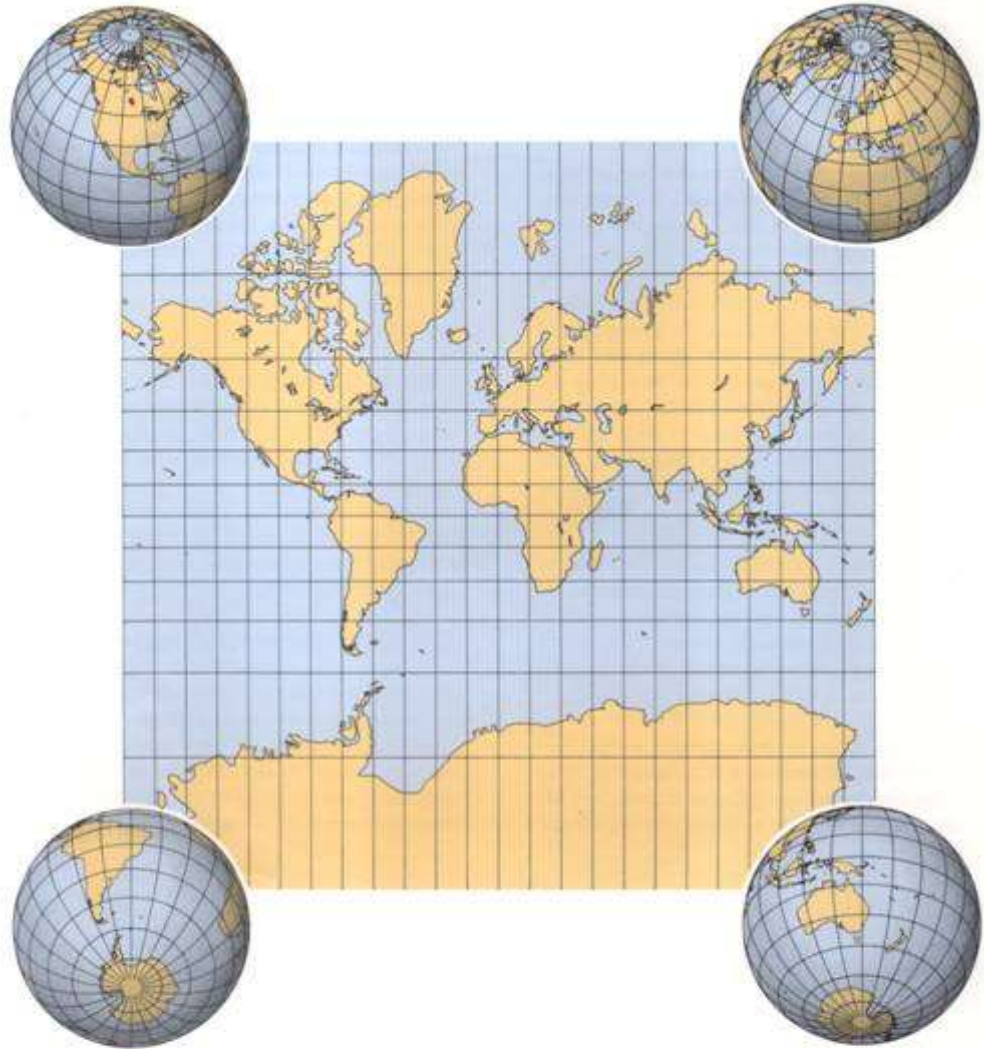


FIGURE 6. Mercator projection. It is conformal and has the unique attribute that any rhumb is shown as a straight line. It greatly exaggerates sizes and distorts shapes away from the equatorial areas, as a comparison with the accompanying globes shows. It does not show true direction since all great circles, other than the meridians and the equator, plot as complex curves. It should not be used as a base for a general map.



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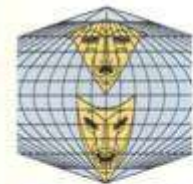
Comedy



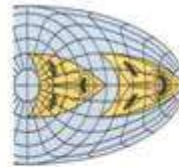
Tragedy



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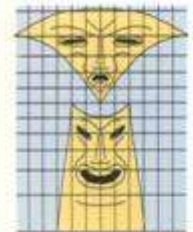
Sinusoidal



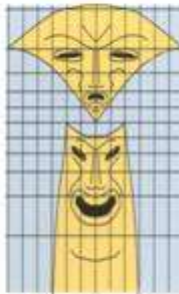
Transverse Mollweide



Equatorial Mollweide



Miller Cylindrical



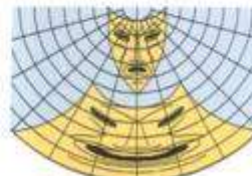
Mercator



Van der Grinten



Robinson



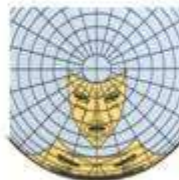
Polar Azimuthal Equidistant



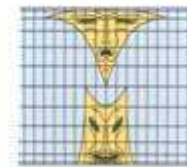
Goode Homolosine



Simple Cylindrical



Polar Azimuthal Equal-Area



Gall-Peters



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A FINAL NOTE

To display the whole earth on a flat map is a complicated operation. Before anything else can be done one must select a map projection to serve as a base. There are many from which to choose in each of the basic classes, and each one can be constructed in any desired aspect. One must settle on the necessary

attributes and then adopt an appropriate distribution of the inevitable distortion.

It isn't easy to make a choice, but the advantages of providing the best possible portrait of the earth are worth the effort.



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Although none of the three publications is new, they are very informative and educative.

My proposal is for the ICA Commission on Map Projections to take these three publications as a model and a base, and after some consideration and modification, as necessary, prepare and publish a book on map projection choice.

The book should be prepared by experts, but with the intention to serve laymen. It is our hope the reader is going to be stimulated to understand map projections and appreciate their versatility.



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Simple Cylindrical



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Thank you for your attention

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