

MAPPING IN SUPPORT OF FRONTIER ARBITRATION: BOUNDARY DEFINITION; BOUNDARY DISCLAIMER NOTES; TOPONYMY

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INTRODUCTION

In previous articles in this series I have commented on various topics that are significant factors in the use of maps in the settlement of frontiers and particularly those that arise during the arbitration of boundary disputes. This article covers three further topics that may arise from the use of maps in boundary arbitration cases. The first concerns unnecessary inadequacies that have arisen in the delimitation of boundaries by Arbitral Courts. The other two, disclaimer notes and toponymy, are of lesser significance but they are often insufficiently understood by those engaged on a boundary case and can cause problems in the resolution of the dispute.

BOUNDARY DEFINITION

In two previous articles¹ I wrote about the importance of ensuring that appropriate maps are used to support the delimitation of boundaries in the judgements of Arbitral Tribunals in boundary cases. I pointed out the inadequacy of the maps used to illustrate the judgements in some previous cases and suggested ways in which the quality of all maps used for delimitation could be made to meet the high standards that have been achieved in a few selected cases. In particular I stressed that the most important users of delimitations are not lawyers but the diplomats, surveyors and administrators who have to make the delimitation work in practice and that they need a clear, unequivocal, graphical depiction of a practical, workable boundary line. I gave details about maps for delimitation and said that I would return in a later article to the form of the text in the delimitation and its relationship to the delimitation map.

To demonstrate the characteristics of textual delimitations I will cite two International Court of Justice cases. In the Burkina Faso/Mali case the judgement states that the maps appended to the judgement are “*purely for illustrative purposes*”² and in the El Salvador/Honduras case that the appended maps are “*for the purposes of illustration.*”³ The implication is that the textual delimitation is definitive and that the boundary lines on the maps are derived from them. In fact, the briefest comparison of the textual and map delimitations shows that in both cases the textual delimitation is derived from the map. This is particularly evident in the Burkina Faso/Mali case where the first paragraph of the textual delimitation includes the statement that “*...the line runs in a northerly direction following the broken line of small crosses appearing on the map... (hereinafter referred to as the “IGN line”)*.” Since, in both cases, the maps are obviously the primary documents and will be used for the demarcation and administration of the border, it seems totally illogical for the judgements to describe them as being “*for illustration only.*” After all, if the textual descriptions were lost, the maps would still prove adequate for all practical purposes, but the textual delimitations on their own would be of no use without the maps. It seems to me that Courts take this attitude to delimitation maps as a matter of habit that persists from the days when frontier maps of remote areas were sketchy and unreliable. Since about 1950, when maps produced by instrumental photogrammetry became generally available, the primacy of textual delimitations over map delimitations has been a fallacy. It is time that the international legal profession acknowledged this fact.

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Stephen B. Jones sets out the right way to produce a textual delimitation (or definition, as he calls it):

“A boundary should not be defined on the basis of descriptions compiled from maps...”

*The best definition or description of a boundary is that based on personal knowledge of the area in question and then prepared with the help of a detailed topographical map. Maps are, however, only a symbolic representation of what obtains on the ground. Correctly speaking, the boundary should be ascertained on the ground and delineation done then only. Definition should not be merely a verbalised delineation. A **boundary should not be defined on the basis of descriptions compiled from maps**, notwithstanding the difficulty this imposes on central governments and foreign offices, few of whom would like to go and visit the often inaccessible areas where boundaries are located.⁴*

The only correction required to this paragraph is to add judges, court officials and lawyers representing parties to the reluctant travellers in the last sentence.

Jones demonstrates that the textual delimitation has a place, even where good maps are available, since there is a lot that maps do not show. In earlier times, when Arbitral Tribunals had a geographical element, textual delimitations were prepared as Jones proposes. At present, while the composition of the International Court of Justice and *ad hoc* Arbitral Tribunals remain entirely lawyer-based, it is unlikely that Jones' model for delimitation will be revived. If, as seems inevitable, textual delimitations are to be derived from the delimitation maps, it is necessary to ensure that they are as complete and interpretable as possible, remembering that they should be directed at diplomats, surveyors and administrators rather than lawyers.

The basic requirements for a textual delimitation are:

- To describe and locate start and finish points and turning points.
- To describe the course of the boundary between turning points as either a straight line or following a physical feature.

The location of turning points is usually cross-referenced to the map by a letter or number and defined by geographical coordinates (latitude and longitude). Since any coordinate system is based on an arbitrary datum, geographical coordinates are likely to be very misleading unless their source is stated.⁵ Ideally the judgement should state the full specification of the coordinate system used (i.e. the spheroid used for calculations and the location and coordinates of the origin) but this will usually be too mathematical for Courts. The usual alternative is to specify which map or maps were used to provide the coordinates. This should always be done, preferably with a warning not to use the coordinates in connection with any other map or survey network. Coordinates should only be stated to the accuracy that can be read from the map. A good 1:50,000 map will justify coordinates to 1" (about 30 metres) as are given in the El Salvador/Honduras judgement but a poor 1:200,000 map does not justify the 1" coordinates in the Burkina Faso/Mali judgement.

If the line between turning points is being derived from a map it is not normally possible to add any useful information that is not on the map, unless it is considered appropriate to add which side of a feature, such as a river, the boundary is to be. In some cases it helps to state the length and/or general direction of a section of the boundary, but care must be taken that these figures are compatible with the coordinate values. It may be that the case has revealed names for features that are not on the map but it is dangerous to add these unless there is absolute certainty about their permanence and acceptance by all parties concerned. Where more is known about the site of the boundary, it is useful to add brief notes on both turning points and joining lines but the notes should be restricted to things that will not change, either seasonally or over the years.

There are some things to be avoided. Maps often have grid coordinates (eastings and northings in metres) as well as geographical coordinates. These are meaningless to

the user unless full details of the grid concerned are supplied and are best avoided as they are only local in character. The problems with using the actual parallels of latitude or meridians of longitude as boundaries are sufficiently well known for it to be unlikely for this old practice to be revived. The former practice of defining a boundary as a set distance from a physical feature is almost certain to produce difficulties and should not be used. Straight sections of boundaries on land are normally short enough to avoid the problems that have arisen with long maritime boundaries due to the earth being a spheroid. However, should a very long straight line (over, say 50km) be proposed, this factor must be considered.

Finally, extreme care is needed with all numerical data. Coordinates read from maps should be independently checked and then carefully monitored as they go through various drafts to the final printing. Mistakes are easily made. In the English version of the Laguna del Desierto (Argentina/Chile) Judgement,⁶ which has recently been published, the Expert Geographer unfortunately uses grid coordinates for the demarcated boundary, without even naming, let alone giving any details of, the grid system used. The values are quoted to 1mm, which seems an improbably high degree of accuracy. This is despite the regulations of the Mixed Boundary Commission requiring that “*in the legal values, the geographical coordinates will be expressed to one tenth of a second of arc.*”⁷ The grid coordinates appear to be in the Mixed Boundary Commission system, in which case all the Easting (Y) and Northing (X) coordinates have been transposed with one another.⁸

BOUNDARY DISCLAIMER NOTES

When a map is submitted as evidence in a boundary arbitration case it is usually because the disputed boundary is depicted on the map and the position of the boundary symbol on the map is offered as a statement of where the boundary falls in the opinion of the map’s producer. In addition evidence may also be offered on how the boundary came to be shown in that location and on who subsequently saw and approved, actively or tacitly, the map and the boundary line. The Court will then make up its own mind on the significance of each piece of such evidence on its merits. The court will normally accept that, where a division of territory is shown by a firm line or change of background colour that division is an unequivocal statement of what the map maker believed was the location of the boundary.

In recent years, an increasing number of official maps have included a boundary disclaimer notice which seeks to dissociate the map producer, and the government that he is part of, from any responsibility for the positioning of the international boundaries shown on the map. Where a boundary is in dispute, or has never been demarcated, this is understandable and the uncertainty is usually indicated by using a broken line for the boundary and annotating it with such words as “*UNDEFINED*”, “*IN DISPUTE*”, or “*EXACT LOCATION UNKNOWN.*” However, many map producers have gone much further by introducing the practice of placing a blanket boundary disclaimer note on all their maps that show an international boundary. Examples are

*THIS MAP MUST NOT BE CONSIDERED AN AUTHORITY ON THE
DELIMITATION OF INTERNATIONAL BOUNDARIES*

which appears on the maps of the UK Directorate of Overseas Surveys (and, presumably by imitation, on the maps of several former British Dependencies) and

*NOTE: THIS GRAPHIC IS NOT AN AUTHORITY ON INTERNATIONAL
BOUNDARIES*

which is shown on maps of the US/UK Joint Operations Graphics series.

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This practice seems to have started in the 1950s with US/UK military, cold war-era maps, which were being produced over a wide area and covering many neutral countries. The notes were intended to avoid the producing countries becoming embroiled as third parties in boundary disputes. Unfortunately, the addition of boundary disclaimer notes proved contagious and they are now almost *de rigueur* on government maps, worldwide. This abdication of responsibility for the accuracy of the contents of a map is regrettable since it reduces the credibility of maps both generally and for use in frontier arbitration cases. It is particularly unfortunate when a boundary disclaimer note is attached to a definitive national map series produced by a government agency. Producers of such maps ought to be proud to stand up and say that their maps indicate the official national view of where their country's boundaries lie rather than deny such knowledge with a legalistic formula.

As far as I am aware, the significance of boundary disclaimer notes has never been commented upon in a judgement or award by an Arbitration Court or Tribunal, nor has any legal commentator remarked on their significance. It would be interesting to know what the legal position on boundary disclaimer notes is. Does the addition of such a note completely rule out that map as evidence about the position of the boundary? In my opinion, while such a note on a map should induce caution in accepting the boundary shown, the boundary line should still be accepted as a representation of the map producer's best effort to achieve accuracy. This should particularly apply where it can be shown that the producer applies a disclaimer note mechanically to all his products.

Interestingly, the relevance of boundary disclaimer notes has recently been raised in a boundary arbitration case. In the case concerning Kasikili/Sedudu Island (Botswana/Namibia), which was heard by the International Court of Justice in March 1999, with a judgement due in Autumn 1999, the matter arose in connection with maps of Namibia produced by the United Nations.⁹ During the period when SW Africa/Namibia was a United Nations Trust Territory, and later when it became the direct responsibility of the United Nations General Assembly, a number of maps of the country were made by the United Nations Cartographic Division in New York. Most of these were at small scales (1:3,000,000 and smaller) and all these contained boundary disclaimer notes, such as

*THE BOUNDARIES AND NAMES ON THIS MAP DO NOT IMPLY
OFFICIAL ENDORSEMENT OR ACCEPTANCE BY THE UNITED
NATIONS*

However, in 1985, the United Nations Cartographic Division made a very impressive, larger scale map of Namibia¹⁰ in response to a decision of the United Nations General Assembly to make a demonstration of support for Namibia during its struggle for independence. This map, which shows Kasikili/Sedudu Island and the boundary of Namibia, does not have any boundary disclaimer note, which is probably unique for a United Nations map. The attention of the Court was drawn to these facts and it was suggested that the absence of a boundary disclaimer on the 1985 map made the line of the boundary on the map particularly significant. It will be interesting to see if the judgement of the Court comments on this matter.

TOPONYMY

Place and feature names on maps (toponymy) can be revealing or, sometimes, misleading. Place names on modern maps are often quoted to support pleadings in boundary dispute cases, yet rarely is the source of the names stated by the user or challenged by the other side. Were the names collected by someone on the ground and, if so, did the collector speak the local language? Or were they provided by someone at a desk in the capital, perhaps with a particular point of view to propagate? You will remember that in Evelyn Waugh's *Scoop*, the strategic town on the map called Laku, to which all the journalists hurtled, did not exist and was just

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the Ishmaelite word for “*I don’t know.*” That story may seem far-fetched but such things do happen. Names mean little unless there is evidence of how they were collected and verified. The Judgment in the Burkina Faso/Mali Case gives a clear warning that the improvements over the last fifty years in map accuracy do not mean that information, such as names, is necessarily more reliable.

The actual weight to be attributed to maps as evidence depends on a range of considerations. Some of these relate to the technical reliability of the maps. This has considerably increased, owing particularly to the progress achieved by aerial and satellite photography since the 1950s. But the only result is a more faithful rendering of nature by the map, and an increasingly accurate match between the two. Information derived from human intervention, such as the names of places and the geographical features (the toponymy) and the depiction of frontiers and other political boundaries does not become more reliable.¹¹

Clearly, in view of this warning, when a name on a map is used to define the location of the boundary or some object or happening, a justification for the positioning of that name on the map ought also to be produced.

On modern maps the map producer’s records will usually show how the names were collected, checked and applied to the maps. For the most meticulous producers there will be names lists showing who provided the name and what authority they had to do so.¹² If such records are not available then the names on the maps should be regarded as uncorroborated. For older maps this verification will not usually be possible but cross checks should be made with other maps and documentary records.

There are difficulties about using names in remote areas, especially by strangers who do not understand local customs. In many remote areas valleys are named and the ridges take their names from the valleys so that they will be named differently according to which side of the ridge the observer is standing. Villages are often named after headmen and so the name changes with the years. Villages also move when the fertility of the soil wears out and take their name with them.¹³

Difficulties also arise where the local language does not use Roman script. There are well-defined rules for transliteration but they are not always used or properly understood. This can lead to great confusion with the generation of quite different versions of the name of one place. The British authority for place names outside the UK is the Permanent Committee for Geographic Names which is based at the Royal Geographical Society. They have an enormous fund of knowledge about place names all over the world and are very helpful to genuine enquirers.

...geographic names appearing on maps should be treated with suspicion...

Names are the easiest thing to add to, or alter on, a reprinted map and such changes are difficult to detect. Topographic detail on a map interlocks, is very difficult to alter or fake convincingly and is easily checked from an air photograph. The same is not true of names. To summarise, geographic names appearing on maps should be treated with suspicion, especially when the map producer is likely to be connected to anyone who is advocating a particular position on the meaning of the names. It is surprising that lawyers who would regard the contents of a written document with much suspicion are sometimes willing to take the names on a map at face value.

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¹ Rushworth D. (1996) ‘Mapping in support of Frontier Arbitration: Maps for Delimitation’, *Boundary and Security Bulletin*, 4, 3: 57-60, Durham: International Boundaries Research Unit.
Rushworth D. (1997) ‘Mapping in support of Frontier Arbitration: Delimitation and Demarcation’, *Boundary and Security Bulletin*, 5,1: 61-64, Durham: International Boundaries Research Unit.

² ICJ Reports (1986) *The Frontier Dispute (Burkina Faso/Mali)*. Para 175.

- 3 ICJ Reports (1992) *The Land, Island and Maritime Dispute (El Salvador/Honduras: Nicaragua*
intervening), Para 425 *et al.*
- 4 Jones S.B. (1945) *Boundary Making*, Washington: Carnegie Foundation for International
 Peace.
- 5 Rushworth D. (1997) 'The Use and Abuse of Coordinates', *Boundary and Security Bulletin*, 5,
 3: 55-60, Durham: International Boundaries Research Unit.
- 6 *Dispute Concerning the Course of the Frontier between BP62 and Mount Fitzroy*
(Argentina/Chile), Judgement 21 October 1994, ILR, Vol. 113.
- 7 *Plan of Work and General Directives of the Mixed Boundary Commission*, 1942, para 61.
- 8 The transposition is obvious from the parameters of the Mixed Commission Grid which
 include:
- | | |
|-------------------|----------------------------------|
| X Origin: | South Pole |
| Y Origin: | 1,500,000m added to all Y values |
| Central Meridian: | 72deg W |
- (Report by the Director of Military Survey UK on the Demarcation Mission of the Argentine-
 Chile Boundary, MOD UK, June 1967, Annex E1, para 5i(2))
- 9 ICJ, 1999, Verbatim Record CR99/4, 17 February 1999, page 52. (Available on the ICJ web
 site: www.icj-cij.org)
- 10 Namibia. UN Map No 3158. 1:1,000,000. 1985.
- 11 ICJ Reports (1986) *The Frontier Dispute (Burkina Faso/Mali)*, Para 55.
- 12 For example, place names on Ordnance Survey maps have to be signed for by three local
 worthies, traditionally the Parson, Schoolmaster and the Postmaster.
- 13 The classic case of this is the village of Yarbutenda which was used to define the eastern limit
 of The Gambia and whose original location is now lost.