

# The ganz revidierte Druck of Ferrari's Wall Map of Suriname: A unique Example of Dutch-German Cooperation in the Field of Educational Cartography

## *Der ‚ganz revidierte Druck‘ von Ferraris Wandkarte von Surinam: Ein einzigartiges Beispiel niederländisch-deutscher Zusammenarbeit auf dem Gebiet der Schulkartographie*

Lowie Brink, Nijmegen (The Netherlands)

German educational cartography influenced the design of Dutch school atlases and school wall maps in many ways. However, the second edition (1969) of F. Ferrari's wall map of Suriname (1955) presents a unique example of actual cooperation between Dutch and German educational cartographers. W. Painke, of the West German cartographic publishing house Justus Perthes, using directions and sources compiled by geography teacher Ferrari, redesigned the first edition of Ferrari's school wall map published by Dijkstra. The cooperation resulted in a much improved physical wall map on which Suriname is clearly, accurately and vividly represented. As could be expected considering the longstanding tradition of the acclaimed Haack-Painke physical wall maps, the relief is depicted with a plasticity unrivalled in maps of Suriname.

■ Keywords: wall map, educational cartography, Dutch-German cooperation, Suriname

*Die deutsche Schulkartographie beeinflusste den Entwurf von niederländischen Schulatlassen und Schulwandkarten in verschiedener Weise. Die zweite Ausgabe (1969) von F. Ferraris Wandkarte von Surinam (1955) liefert jedoch ein einzigartiges Beispiel von wirklicher Zusammenarbeit zwischen niederländischen und deutschen Schulkartographen. W. Painke vom westdeutschen Kartenverlag Justus Perthes berichtete, unter Verwendung von durch Geographielehrer Ferrari kompilierte Anweisungen und Quellen, die im Dijkstra Verlag erschienene, erste Ausgabe von Ferraris Schulwandkarte. Die Zusammenarbeit ergab eine stark verbesserte, physische Wandkarte, auf der Surinam anschaulich, akkurat und lebhaft abgebildet ist. Wie zu erwarten war, mit Rücksicht auf die langjährige Tradition von den gerühmten, physischen Haack-Painke-Wandkarten, zeigt die Geländedarstellung eine Plastizität, die beispiellos ist in den Karten von Surinam.*

■ Schlüsselwörter: Wandkarte, Schulkartographie, deutsch-niederländische Zusammenarbeit, Surinam

### 1 Introduction

It should not come as a surprise that the maps of Suriname, a region once described as the most Dutch colony of The Netherlands (Jacobs 1916), are usually of Dutch or Surinam composition. This is

also true for Ferrari's *Kaart van Suriname*, which was issued in 1955 by publishing-firm Dijkstra in Zeist, The Netherlands. However, the second edition of this school wall map (1969) reveals a unexpected and unmistakable German appearance, which

gives room to only one conclusion: somewhere the Dutch and German educational cartography must have mixed. Thanks to correspondence turned up in the family archive of Ferrari this unique cooperation could be reconstructed.

Information exchange between Dutch and German educational cartography is not uncommon in the 19<sup>th</sup> and 20<sup>th</sup> century, but as a rule the information flows from east to west. The latter applies to school atlases but even more so to school wall maps: „Die deutsche Wandkartenherstellung [ist] führend in der Welt.“ (Bosse 1972). Apart from German influences on the design of Dutch school wall maps (Brink et al. 2010, p. 16–18) various German school wall maps with the map lettering in Dutch were published under licence in The Netherlands, e.g. by Thieme (1915, 1921), Luctor (Westermann maps, the sixties), Dijkstra (Justus Perthes maps, the sixties, see Fig. 1) and not long ago by Wolters-Noordhoff (five VEB Hermann Haack maps, 1990). In view of the high development costs and the limited print orders of school wall maps it is understandable that at times Dutch publishers refrained from own productions and opted for publications under licence. However, publishing-firm Dijkstra (in Zeist) and author F. Ferrari (in Paramaribo, Suriname) also tested a model of cooperation that was unique in The Netherlands: a revision of an existing Dutch school wall map of Suriname by W. Painke of *Kartenverlag Justus Perthes* in Darmstadt. Below the three elements of this international map production will be described: the Dutch-Surinam input, the German input and the cooperation.

### 2 The Dutch-Surinam input: Dijkstra, Ferrari and Luchtkaartering

In April 1950 Frans Ferrari (1921–1993), a physical geographer from the university in Utrecht, took somewhat nervously the boat to Suriname to work in Paramaribo as a geography teacher. The *Welfare Fund* founded in 1947 and the new effort to develop Suriname systematically were aimed to increase the level of prosperity in this somewhat neglected outpost.



Fig. 1: *Die Erde* by [H.] Haack and [W.] Painke published by Justus Perthes in Darmstadt (sixth edition, [1968], scale 1:16 000 000, 4 map sheets, 125 x 210 cm) and underneath the edition under licence *De aarde* published by Dijkstra in Zeist (1968). Apart from the Dutch map lettering provided by Kooyman the two wall maps are completely identical.

One of the results was the establishment in 1950 of the first secondary school of Suriname in Paramaribo. An appointment as geography teacher at this school was the reason for Ferrari's emigration to Suriname (see Fig. 2). The complete lack of (school) wall maps of Suriname for use in geography education (Brink 2007) hampered Ferrari's work in the classroom. Therefore, at the end of 1953 he approached two educational publishers: the well-known market leader Wolters and 'coming star' Dijkstra. The Wolters company showed interest in publishing a school wall map, and had already negotiated with the Department of Education in Paramaribo about such an issue in 1949.

However, the energetic S.J.P. Dijkstra was more assertive than Wolters. He travelled to Paramaribo for an exposition in the Department of Education of school media supplied by Dijkstra and for personal talks with Ferrari and the chief inspector of education, K.R.S. Coleridge. Moreover, Dijkstra offered Ferrari much higher royalties, so that the contract for a large-sized school wall map of Suriname on the scale of 1:500 000 could be quickly signed. From the forties Dijkstra was highly successful with the publication of school wall maps containing economic symbols (Brink et al. 2010, p. 160–165), and therefore it was not surprising that at first he insisted on the use of these symbols in Ferrari's

map. However, Ferrari and the director of the Department of Education, dr. J.H.E. Ferrier (who in 1955 was to become Prime Minister of Suriname) persuaded Dijkstra out of such symbols: there simply was not enough space for all these graphic representations in the coastal plain and in the surroundings of Paramaribo. Ferrari was given a free hand and started working. In May 1954 Coleridge approved his manuscript map and Ferrari sent it to the Dutch printer (most probably J. van Boekhoven in Utrecht). As a result of quarrels about the number of maps to be purchased by the Ministry of Education Ferrari's wall map was issued not until the following year, but, finally, in 1955 the first school wall map of Suriname was a reality (see Fig. 3).

Ferrari's wall map summarizes the state of geographical and geological knowledge of Suriname in the year 1955. Such a map did not exist yet, and its compilation was a complex matter, as from 1947 a remarkable growth of the amount of this knowledge took place. The growth can be mainly ascribed to the new technique of *lucht-kaartering* ('aerial mapping'). In 1947–1948, using capital of the Welfare Fund, KLM Aerocarto took air-photographs of Suriname north of the fourth degree of latitude, which subsequently the National Mapping Agency (*Centraal Bureau Luchtkartering*, CBL) of Suriname in Paramaribo remodeled to topographic maps. In 1956–1960 the part of Suriname south of the fourth degree of latitude was photographed, but obviously this information could not be used by Ferrari. In case of South Suriname Ferrari had to revert to the *Kaart van Suriname* of Bakhuis and De Quant (1930, 1:200 000), which was based on the map of Cateau van Rosevelt and Van Lansberge (1882) and on the results of the scientific expeditions in the period 1900–1926. As in 1954 only a few map sheets of the 1:40 000- and 1:100 000-series were published by the CBL, Ferrari obtained permission of the Minister of Education to make use of the unpublished information. The latter explains the fact that the depiction of the river system in North Suriname on Ferrari's map is more complete and accurate as compared to Bakhuis's map, whereas the river system in South Suriname is derived

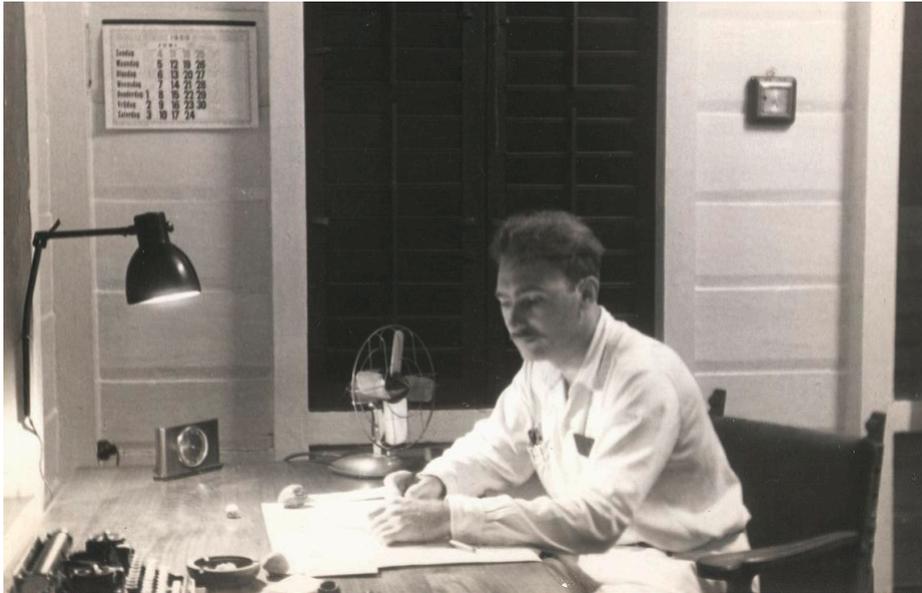


Fig. 2: In June 1950 the fresh geography teacher of Paramaribo, F. Ferrari, poses at his new writing-bureau in his wooden house in the Gravenstraat. Thermometer, calendar and barometer hang on the wall.

from Bakhuis. Furthermore, the detailed drawing of the *ritsen* (old sand bars) in the coastal plain is based on air-photographs or on map sheets derived from these photographs. A clear bipartition can also be distinguished in the relief representation. The rather detailed 200 m- and 500 m-contours in North Suriname originate from the CBL, whereas the sketchy contours (form lines) in South Suriname are derived from the hill shading and altitudes in Bakhuis's map. However, in 1954 the CBL could not provide yet new and more accurate altitudes of the mountain-tops: on Ferrari's map these altitudes are identical to those on the important *Overzichtskaart van Suriname* composed by Spirlet in 1913 (Koeman 1973). They are all considerably different from height measurements carried out later, and nevertheless hold out on the maps of Suriname for more than half a century (circa 1905 – circa 1960). Ferrari presents on his map by means of three colours a geological division of a part of the lowland up to 200 m: clay with *ritsen* (Demerara-series), clay and sand (Coropina-series) and sand (Zanderij-series). This division and the terminology used are in agreement with the *Geologische overzichtskaart van Suriname* (1953) of the *Geologische Mijnbouwkundige Dienst* (Schols et al. 1953). Finally, the map is also up-to-date as regards political correctness: in the fifties

the term *bosneger* was gradually replaced by *boslandcreool*, and Ferrari was able to change the term *bosnegerdorp* just before the date of publication.

Ferrari's map shows some cartographic flaws:

- The absence of hill shading gives the map a flat appearance;
- The colours of the hypsometric layers are atypical (lowland light brown) and make Suriname look brown instead of green;
- The use of soil type colours and hypsometric tints side by side on the same map is confusing;
- In the surroundings of Paramaribo the wall map is overloaded and unclear from a distance;
- Confusion is also possible by using black lines to indicate *ritsen*, small

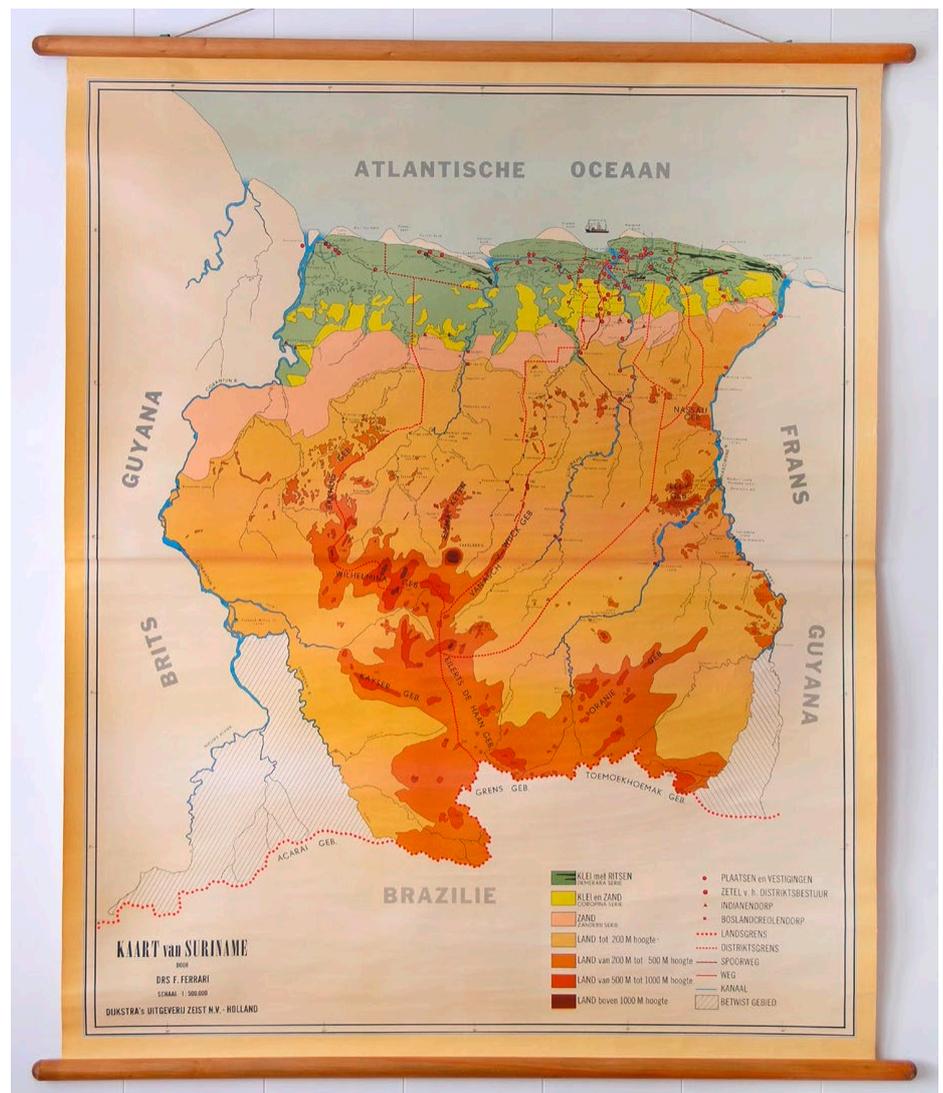


Fig. 3: *Kaart van Suriname* by F. Ferrari (first edition, [1955], scale 1:500,000, 2 map sheets, 134 x 107 cm).

ivers, the upper courses of rivers and the separations between soil types and hypsometric layers;

- The neighbouring countries appear to be desolate.

However, in 1955 the *Kaart van Suriname* did not have to fear competition and sold fairly well (383 copies in the first four months, of which 150 went to the Ministry of Education in Paramaribo). The map received favourable reviews in Suriname and in The Netherlands (Bredemeijer, 1956), and a presentation copy was accepted gratefully by the Royal House. About 1960 already a second modified, very small print order (see Fig. 4) appeared, obtained by overprin-

ting (rejected?) remainders of the first printing, but this served a special goal. During the government of the cabinet Emanuels (1958–1963) the disputed areas (the hatched areas in Fig. 3) came on the agenda again. As a result, Ferrari's keen publisher decided it was appropriate to attribute a Surinam colour (,land with unknown height') to these two areas on the map and to overprint the term ,disputed area' in the legend. In addition this gave an opportunity to indicate on the map new airstrips, two projected reservoirs, modified district boundaries (each by black overprint) and new and projected roads (by red overprint). To pursue the acquaintances presentation

copies of the updated map were offered to the Ministry of Education and to the Minister of Education personally. In 1968 it would become clear that the Ministry of Education had completely forgotten the loyal attitude of Dijkstra and Ferrari, but now we are getting ahead of the story.

### 3 The German input: Justus Perthes, Painke and Haacksche Wandkarten

In March 1939 Werner Painke (1920–1988), a cartographer from the Higher Graphic Arts School in Berlin, took somewhat nervously the train to Gotha to apply for a job at the *Geographische Anstalt Justus Perthes, the Mekka der Privatkartographie*. On arrival at the map department he was deeply impressed: „Ich las die Namen unter den Bildern: Stieler, Von Sydow, Petermann, Berghaus, Vogel, Wagner. ... Es roch geradezu nach Tradition!“ (Painke 1985) Tradition is certainly characteristic of this *Kartenverlag*, founded in 1785 and led by seven generations Perthes, but next to it also innovation. This is witnessed by Perthes publications like Stielers Hand-Atlas, Spruners Historisch-Geographischer Hand-Atlas, Berghaus' Großer Physikalischer Atlas, Petermanns Geographische Mitteilungen and various renowned school atlases and school wall maps. In 1838 E. von Sydow initiated the long tradition of school wall maps at Justus Perthes with strongly generalized, physical wall maps with *Sydowsche Höhenfarben* (green lowland, brown highland) (Brink et al. 2010, p. 18), which subsequently were modernized by H. Habenicht. However, it was the *schreibende Kartograph* Hermann Haack, who in 1907 made cartographic history with his *Großer Geographischer Wand-Atlas*. As a result of the following characteristic properties of his physical wall maps Haack accomplished a scientifically based reform of wall map design:

- *Schattenplastik*: a relief representation with remarkably vivid plasticity;
- *Farbenplastik*: effectual, harmonic colours of the hypsometric layers adapted to clarity at distance (saturated green, light green, ochre tints, brown tints, fiery red);
- a skilful *wandkartengerechte* generalisation;

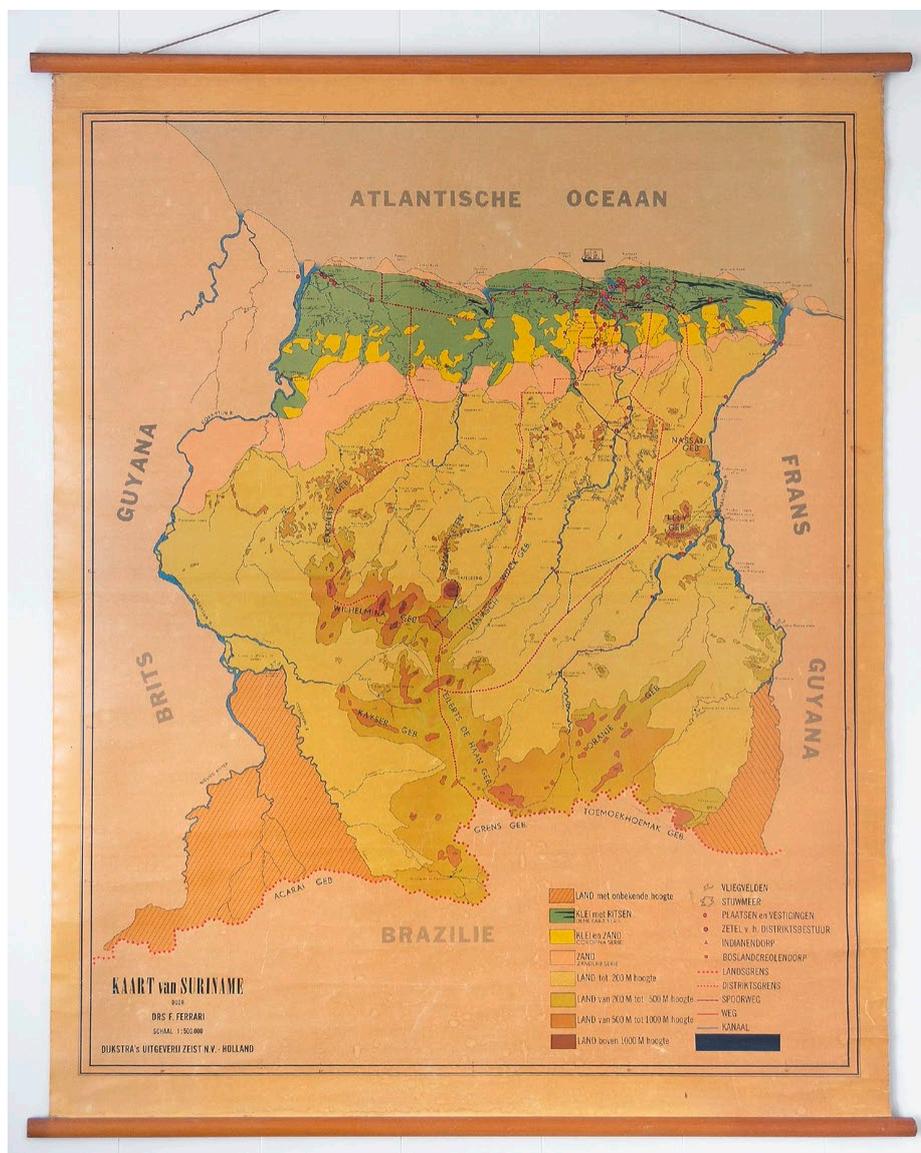


Fig. 4: *Kaart van Suriname* by F. Ferrari (modified first edition, [ca. 1960], scale 1:500 000, 2 map sheets, 134 x 107 cm). The two disputed areas were overprinted and indicated in the legend as ,area with unknown height'.

- a large black margin which enhances the intensity of the colours.

The school wall maps of Haack became worldwide classics.

In 1953 Joachim and Wolf-Jürgen Perthes together with Painke – since 1950 head of the map department – fled the East German Gotha and started the company from scratch in an empty building in Darmstadt at the other side of the Iron Curtain. As late as 1985 this was called in East German jargon: „Der Besitzer des Verlages kehrte der DDR den Rücken.“ (Suchy 1985) Those left behind in Gotha went on under the leadership of Haack as a *Volks Eigener Betrieb*. Both companies concentrated on school wall maps and remained true to the above-mentioned *Haacksche Grundsätze*, so that until 1989 both West and East German *Haacksche Wandkarten* were produced. Painke worked as cartographic draughtsman and map editor at the wall map programme of Justus Perthes (Ormeling, 1992), but Haack's name was kept being mentioned on the wall maps: ‚Haack-Painke‘. A West German modernization was the replacement of hachures, considered to be indispensable by Haack, by hill shading. Accordingly, the second employee in Darmstadt (Painke was the first) was a cartographer specialized in *Schummerung*, G. Pöhlmann. A large number of physical, political, thematic and historical school wall maps appeared under the flag of Justus Perthes, and especially the physical maps were sold in fourteen languages all over the world. Only in four cases special wall maps of countries were developed in collaboration with clients: wall maps of Denmark, Mexico and Nigeria and the wall map of Suriname, the subject of this article.

#### 4 The cooperation: ‚Haack-Painke-Ferrari‘

As was suspected by Dijkstra and Ferrari the Wolters firm did not want to fall behind. In 1958 Wolters issued a relatively inexpensive and small school wall map of Suriname (one map sheet, scale 1:600 000) that was entirely executed with hypsometric tints and hill shading (see Fig. 5). The map turned out to be successful

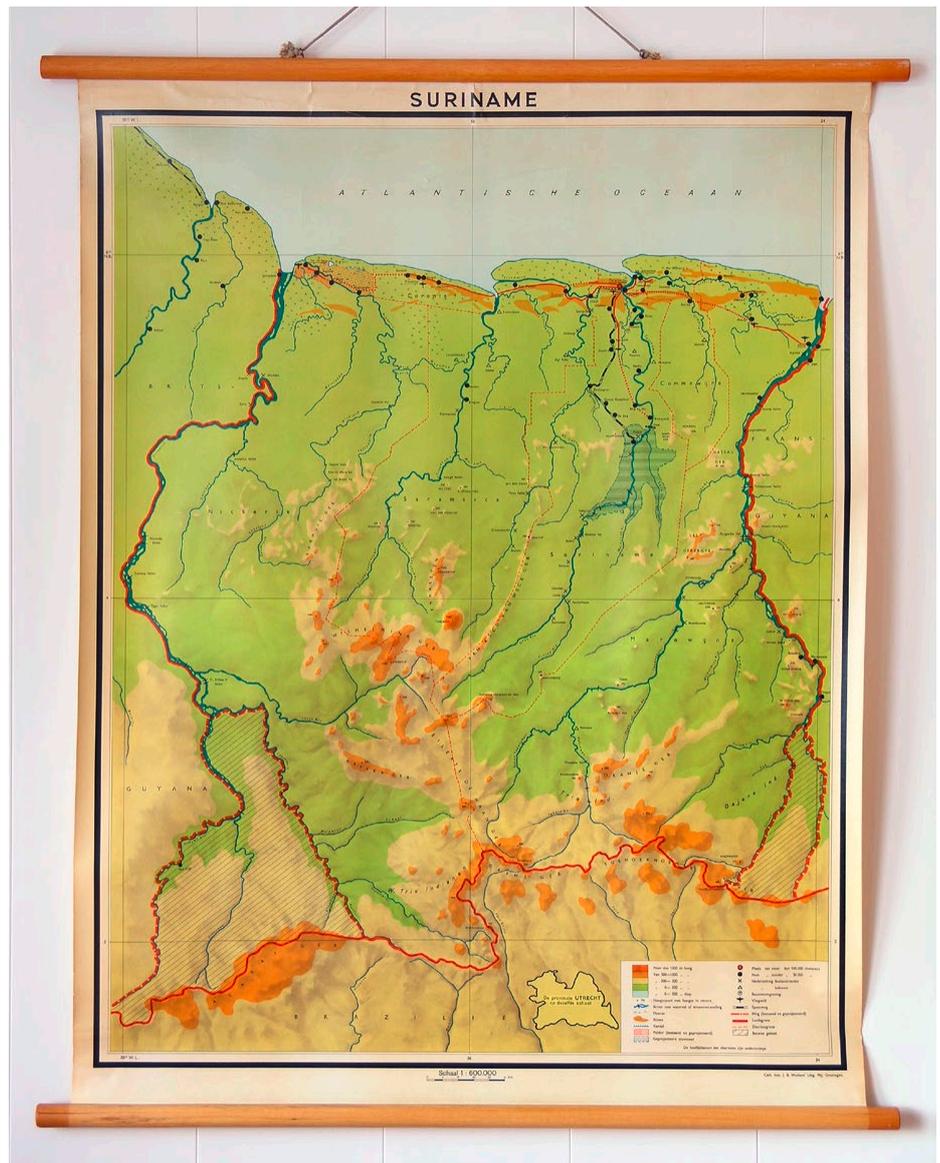


Fig. 5: Suriname with P. Eibergen and F.J. Ormeling as authors according to a publisher's catalogue of Wolters (first edition, [1958], scale 1:600.000, 1 map sheet, 100 x 76 cm).

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– certainly in The Netherlands – for in 1965 already a second edition appeared. Dijkstra in his turn also did not want to be outdistanced, and in april 1967 he informed Ferrari that he wanted to bring out a second edition with only hypsometric tints. Dijkstra, unlike Wolters, did not have at his disposal a *Cartografisch Instituut*, but gained favourable experiences with Justus Perthes (see Fig. 1) in the sixties, so that the latter was requested to work out and print Ferrari's map design. Ferrari was eager to correct and update his first edition. As by now the CBL had acquired a mountain of cartographic information, it was a good idea of Ferrari to ask the CBL to update manually his modified first edition on the basis of a list of revisions composed by Ferrari. The map thus obtained and a very extensive and detailed explanation by Ferrari was sent to Dijkstra, who arranged for a German translation

of the explanation and subsequently sent everything to Darmstadt. Painke proposed the following alterations:

- lines simpler and stronger;
- names bigger and better placed;
- addition of names of districts;
- roads in black;
- no soil types, only hypsometric tints;
- and the most important alteration: addition of 100 m-contours, harmonic colours of hypsometric layers and hill shading.

Ferrari wanted to retain the soil types in view of their importance to the populated coastal plain, but was faced with opposition from both Painke and Dijkstra. Painke was given the green light, and after two rounds of corrections the resulting map design was a genuine *Haacksche Wandkarte* with a *Haacksche* relief representation and the traditional *Haacksche* lay-out: in the upper black margin the names of

the authors („Haack-Painke-Ferrari“), the title and the name of the publisher (Dijkstra), and in the lower black margin the scale and the legend (see Fig. 6). Hence, a wall map with a German appearance, but largely designed on the basis of Dutch-Surinam guidelines and sources. To illustrate the cooperation further, first the impressive relief representation will be discussed, and subsequently some other map elements will be considered (the quotations originate from Ferrari's letters to Dijkstra and Painke).

*Relief: „Auf einigen Plätze läuft die 200 m-Höhelinie durch die alte 500 m-Linie.“*

The hill shading added by Painke in combination with the new hypsometric tints show a clear picture of the Surinam landscape and put life into the map. In case of the 500 m- and 1000 m-contours and the altitudes of the mountain-tops Painke could make use of the CBL topographic map to the scale of 1:500 000 (second edition 1966–1968) published shortly before. However, the 100 m- and 200 m-contours are lacking on this map and were derived from the 1:200 000-series (1958–1966). The latter turned out to be a „sehr schwierige Arbeit“, as the 1:200 000-series is unicoloured, overloaded and insufficiently generalized (Koeman 1979). As a result of the new altitude data of the CBL the areas higher than 1000 m – on Ferrari's first edition clearly visible – shrink to a few small, barely noticeable spots on the second edition. However, the lowland below 200 m (green colours on the second edition) does not go very far inland any more as compared to the first edition (light brown) and also as compared to the Wolters wall map (hypsometric layers similar to Ferrari's first edition). Not only the establishment of the hypsometric layers took up a great deal of time, but also the depiction of the terrain by hill shading appeared to be a difficult and laborious task. On the basis of the contours and the complete river system (of which the small rivers are usually not reproduced on the second edition) on the CBL maps, it appeared feasible to model a plastic image of Suriname. It was not possible to revert to older maps, as in the words of Painke „die bisher existierende Karten



Fig. 6: *Suriname* by [H.] Haack, [W.] Painke and [F.] Ferrari (second edition, [1969], scale 1:400 000, 2 map sheets, 141 x 125 cm). „Dijkstra's Uitgeverij Zeist N.V.“ is stated as the publisher in the upper right corner.

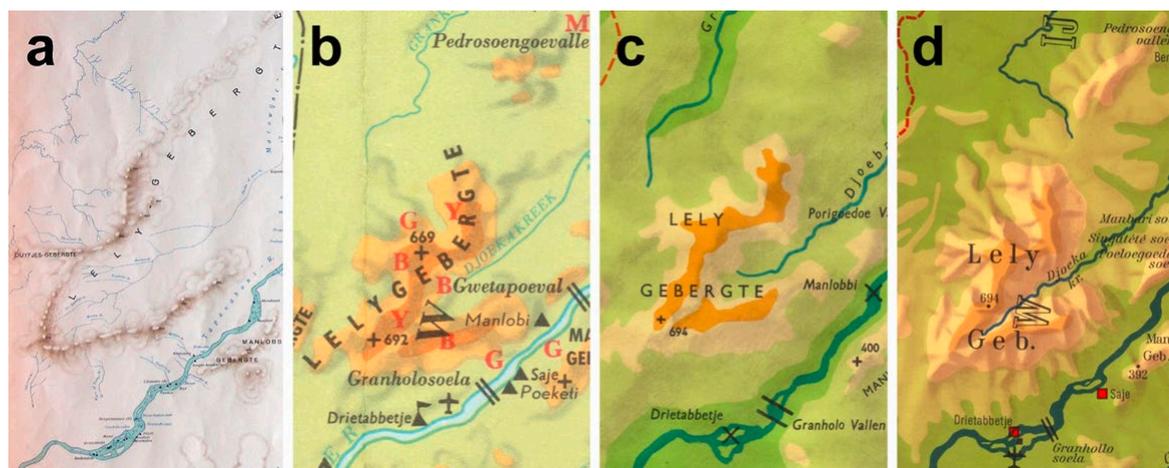


Fig. 7: Depiction of the Lely mountain range on maps of Suriname with hill shading; a: Bak-huis and De Quant (1930, 1:200 000), b: Dahlberg (1975-version, but identical to 1960-version, 1:1.000 000), c: Eiberger and Ormeling (published by Wolters, second edition, 1965, 1:600 000), d: Painke and Ferrari (published by Dijkstra, second edition, 1969, 1:400 000).

mit Geländezeichnung wirklich miserabel sind.“ Though this could have been put somewhat more diplomatic, it contains a kernel of truth (see Fig. 7). In order to execute the hill shading Painke asked Ferrari for morphological information about Suriname. That was just the thing for physical geographer Ferrari, and he sent Painke his treatise of base levels, beheaded streams, sandstone complexes, fractures, plateaus, etc. Painke thanked Ferrari for this information „in denen einige sehr wichtige Hinweise für uns enthalten sind.“ With the latter he most probably alludes to Ferrari's characterization of the Surinam highland as a mature to old landscape and the Wilhelmina mountain range as a young landscape. On the map this can indeed be recognized (see Fig. 8). The hill shading in the three neighbouring countries is partly derived from the river system on the CBL map to the scale of 1:1.000 000 (1968). Especially in Brazil it is noticeable that the hill shading is coarse and flat as a result of insufficient data. Only one relief form on the second edition comes off badly: the slight but economically important, protracted terrain elevations in the coastal plain – the *ritsen* – are not well visible (see Fig. 9).

*Hydrography:* „Nobody has heard of the Johanna Margaretha canal for years, and it is completely silted up and overgrown.“

Some projected canals in the Nickerie district were added to the limited number of canals on the first edition. The river system is also somewhat more extensive, all in blue and much more legible (see Fig. 9), so that now, for example, it can be

observed that all small rivers in the coastal plain bend to the west. A shortcoming on both the first and second edition is the absence of swamp symbols for the widespread *zwampen*. The depiction of the rapids (*soela's*) is complete and more accurate on the second edition, and, of course, the new reservoir finished in 1965 is prominently present: „Der Prof. Dr. Ir. W.J. van Blommesteinmeer soll ganz blau gemacht werden. Drinnen fällt alles weg.“

*Frontiers:* „Es ist äußerst wichtig daß die sogenannten umstrittenen Gebiete ganz gleich markiert werden wie der Rest von Surinam.“

The frontier between Suriname and Brazil is determined by a watershed and could be settled without complications by three border expeditions (1935–1938). The district boundaries are also mainly determined by watersheds, and only lead to uncertainty – as on the first edition – if these watersheds are inadequately mapped. On the other hand, the frontiers with (British) Guiana and French Guiana are determined by the rivers Courantyne and Maroni respectively, and that is asking for *umstrittene Gebiete* (see Fig. 3) if the neighbouring countries can not come to an agreement about the location of the upper courses of these rivers. Remarkably, in the thirties the Dutch government gave up these disputed areas in draft treaties with Great-Britain (1931) and France (1939) (Wekker 1984). But as these treaties were never signed, Ferrari correctly marked them on the first edition as still being disputed. However, in the sixties the mood in Suriname turned: river names

were changed by resolution, border guard was established and semimilitary posts were set up. Therefore, it is understandable that on the second edition the *umstrittene Gebiete* were added to Suriname, and this time in a cartographically proper manner.

*Map lettering:* „Namen der Flüsse geben einen Holzeindruck.“ (broken German for wooden, inelegant impression)

Ferrari was far from pleased with the placing of the map lettering on the first edition. River names did not follow the line of the river, and „the place-names round the lower course of the Commewijne are very poorly positioned.“ The map lettering in the surroundings of the Commewijne river can serve as a cartographic examination, and the second edition easily passes this test (see Fig. 9). Thanks to the somewhat larger scale but especially thanks to the cartographic experience at Justus Perthes, the map lettering – even in this crowded area – is unambiguous and well legible.

## 5 De laatste resten tropisch Nederland

The combination of Dijkstra's spirit of enterprise, Ferrari's knowledge and accurateness, CBL's storehouse of information and the rich cartographic experience of Painke and Justus Perthes yielded an eye-pleasing wall map, which accurately and plastically reproduces the strongly changing image of the nearly independent Suriname in the year 1969. This cooperation of Dutch and German educational

cartographers was unique, progressed smoothly (despite some linguistic complications) and should have been practised more frequently by Dutch publishers without a *Cartografisch Instituut*. Ferrari

could have applied more counterpressure to the *Haacksche* cartography regarding soil types and *ritsen*, through which the economically important coastal plain would have appeared less empty. Never-

theless, as physical wall map the *zweite ganz revidierte Druck* is almost impossible to surpass. It would take a digital terrain model in the hands of a very skilful cartographer to overshadow its relief representation.

Fig. 8: Depiction of the young landscape of the Wilhelmina mountain range (above, hill shading yields a rough image) and of the mature to old landscape of the Eilerts de Haan mountain range (below, hill shading yields a relatively flat image) on the second edition of Painke and Ferrari (1969).

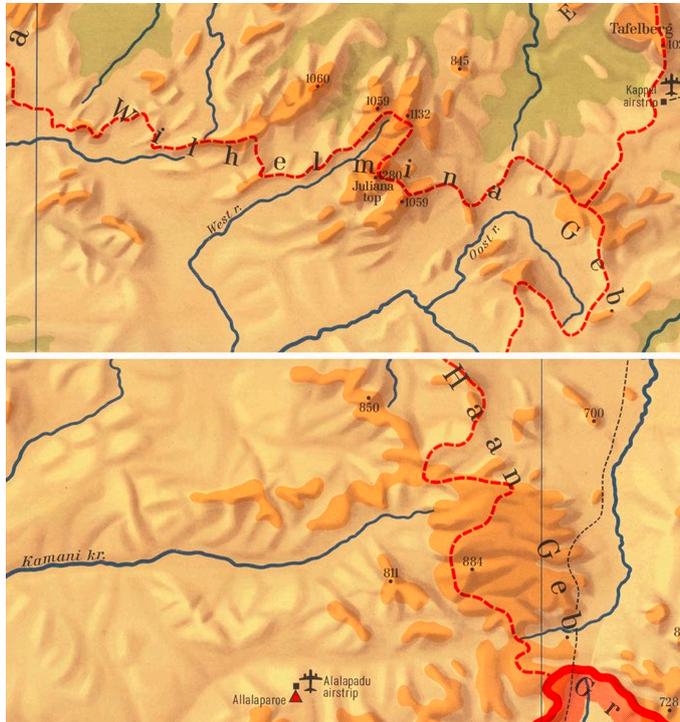
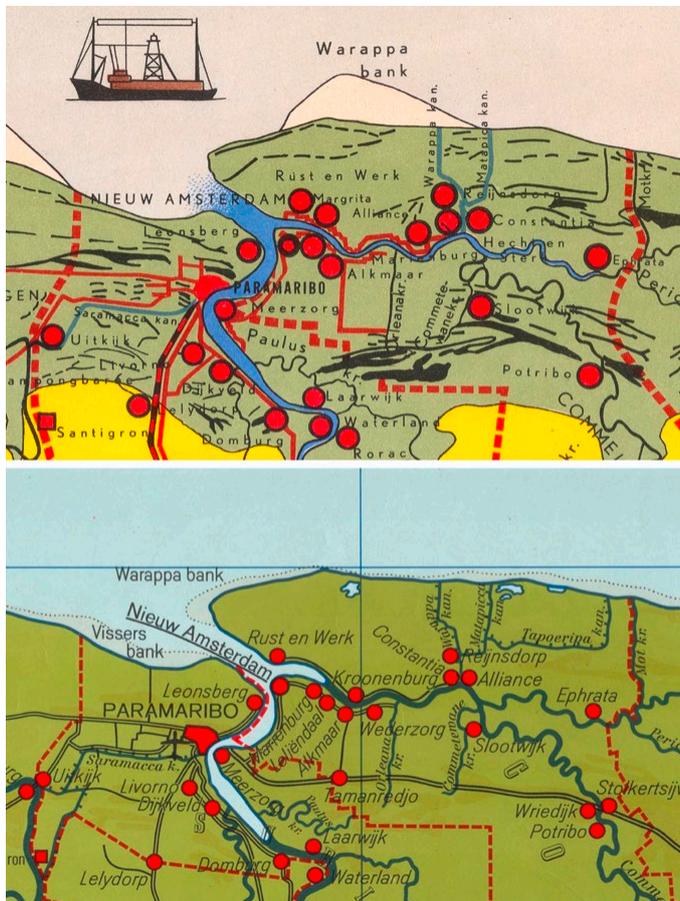


Fig. 9: River-mouth of the Commewijne river in the Suriname river (above: first edition of Ferrari, below: second edition of Painke and Ferrari). The *ritsen* are indicated with black in the upper map extract and with light brown in the lowest map extract.



Despite its qualities the second edition sold significantly less well than the first edition. But this time formidable competition showed up. For in the same year (1969) the popular and cheaper third edition of Wolters(-Noordhoff) as well as the large-sized school wall map (scale 1:400 000) of the Kersten publishing-firm in Paramaribo were issued. It was painful to Ferrari and Dijkstra that the Kersten map was accomplished by order of the Department of Education. The loyal attitude of Ferrari and Dijkstra with respect to the Department was of no importance any longer in 1968. Considering the rising nationalism in Suriname in the late sixties, it is understandable that the Department of Education selected a Surinam publisher (and a Surinam map author because according to Ferrari the geographer Dahlberg was the maker), but Ferrari was very disappointed with this outcome. Furthermore, the work atmosphere in Paramaribo deteriorated for Ferrari as issues arose with a new draft of leftist „provo-leraren“. In his book *De laatste resten tropisch Nederland* Willem Frederik Hermans, a physical geographer and famous Dutch literary author, gives a short account of these issues after visiting the Ferrari family in Paramaribo in January 1969: „Ferrari is the scapegoat of Surinam educational circles“ (Hermans 1969). Add to this that Ferrari's health worsened, and it becomes comprehensible that the former „Suriname-fan“ longed to go back to The Netherlands. As *bakra* (white man) he nevertheless stood out for nineteen years. Again, in February 1969 Ferrari took somewhat nervously the boat, but this time to The Netherlands to retire in the countryside. His name would only pop up a few times in encyclopedia as author of the entry ‚Suriname‘. Even in a journal intended for Dutch geography teachers his name is not mentioned in articles about the school wall maps of Suriname (Conradi 2003, Kranenburg 2007). How unjustly.

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**About the author** Dr. ir. Lowie Brink (info@wereldaandewand.nl) gained his master's degree in chemical engineering at Delft University of Technology and his Ph.D. at Wageningen University and Research Centre. He is the owner of the antiquarian bookshop 'De Wereld aan de Wand' (www.wereldaandewand.nl), which specializes in wall maps. He published several articles, a book and a bibliography on the subject of Dutch school wall maps.

**About this article:** A Dutch version of this article has appeared in Caert-Thresoor 31 (2012), p. 115–122.

**Manuscript** submitted 2.10.2012, accepted after reviewing 19.6.2013.

# Barrierefreie Karten: Entwicklung einer webbasierten Desktop- und mobilen Anwendung für sehbeeinträchtigte und blinde Personen

## *Accessible Maps: Developing a Web Based Desktop and Mobile Application for partially sighted or blind people*

Fritz Zobl, Sabine Hennig, Salzburg (Österreich); Julia Neuschmid und Wolfgang W. Wasserburger, Schwechat (Österreich)

Mittlerweile gibt es eine Vielzahl an webbasierten Karten, mit deren Hilfe Städte, Regionen oder Länder von zu Hause oder mit mobilen Endgeräten vor Ort erkundet werden können. Personen mit Farbsinnstörung sowie seh- schwache und blinde Menschen benötigen für die Informationsaufnahme aus Karten ein optimiertes User Interface- und Kartendesign, sowie für Sprach- ausgabe zugängliche Inhalte. Im Rahmen des AccessibleMap-Projektes wurde daher basierend auf empirischen Untersuchungen und dem Einsatz geogra- phischer Informationstechnologien eine prototypische Desktop- und auch mobile Applikation eines barrierefreien Stadtplanes anhand eines Wiener Testgebietes entwickelt und umgesetzt. Dies soll auch Personen mit Sehbeein- trächtigung die Nutzung von webbasierten Stadtplänen erleichtern.

■ Schlüsselwörter: Internetkartographie, mobiles Endgerät, Kartendesign, barriere- frei, sehbeeinträchtigte Personen, blinde Personen

*Today cities, regions or countries can be discovered easily from home or on-site with the help of web-based maps. They assist to discover streets, districts and squares by supporting orientation, mobility and feeling of safety. Nevertheless do online maps still belong to those elements of the web which are hardly or even not accessible for colourblind, partially sighted or blind people. Therefore the main objective of the AccessibleMap project was to develop methods for designing web-based city maps in a way that they can be better accessed – either on Desktop computers or mobile devices – by people affected by colour vision deficiency, limited sight or blindness in various application areas of daily life. Developments have been tested in a district of Vienna.*

■ Keywords: web mapping, mobile device, map design, accessible, partially sighted people, blind people

## 1 Einleitung

Weltweit wird die Anzahl blinder und sehbehinderter Menschen auf ca. 285 Millionen (39 Millionen Blinde, 246 Milli- onen sehbehinderte Personen) geschätzt (URL 1), in Deutschland wurden für 2002 ca. 1,2 Millionen sehbehinderte und blinde Menschen angegeben (URL 2), in Österreich wurden ca. 300 000 betroffene

Personen registriert (Behindertenbericht 2008).

Nach den gesetzlichen Bestimmungen und Versorgungsrichtlinien gilt beispiels- weise in Deutschland eine Person als blind, wenn ihre Sehschärfe auf dem besseren Auge auch mit optimaler Brillen- oder Kontaktlinsenkorrektur höchstens 0,02 beträgt (Sehrest von 2 % oder weniger), oder wenn andere dauerhafte