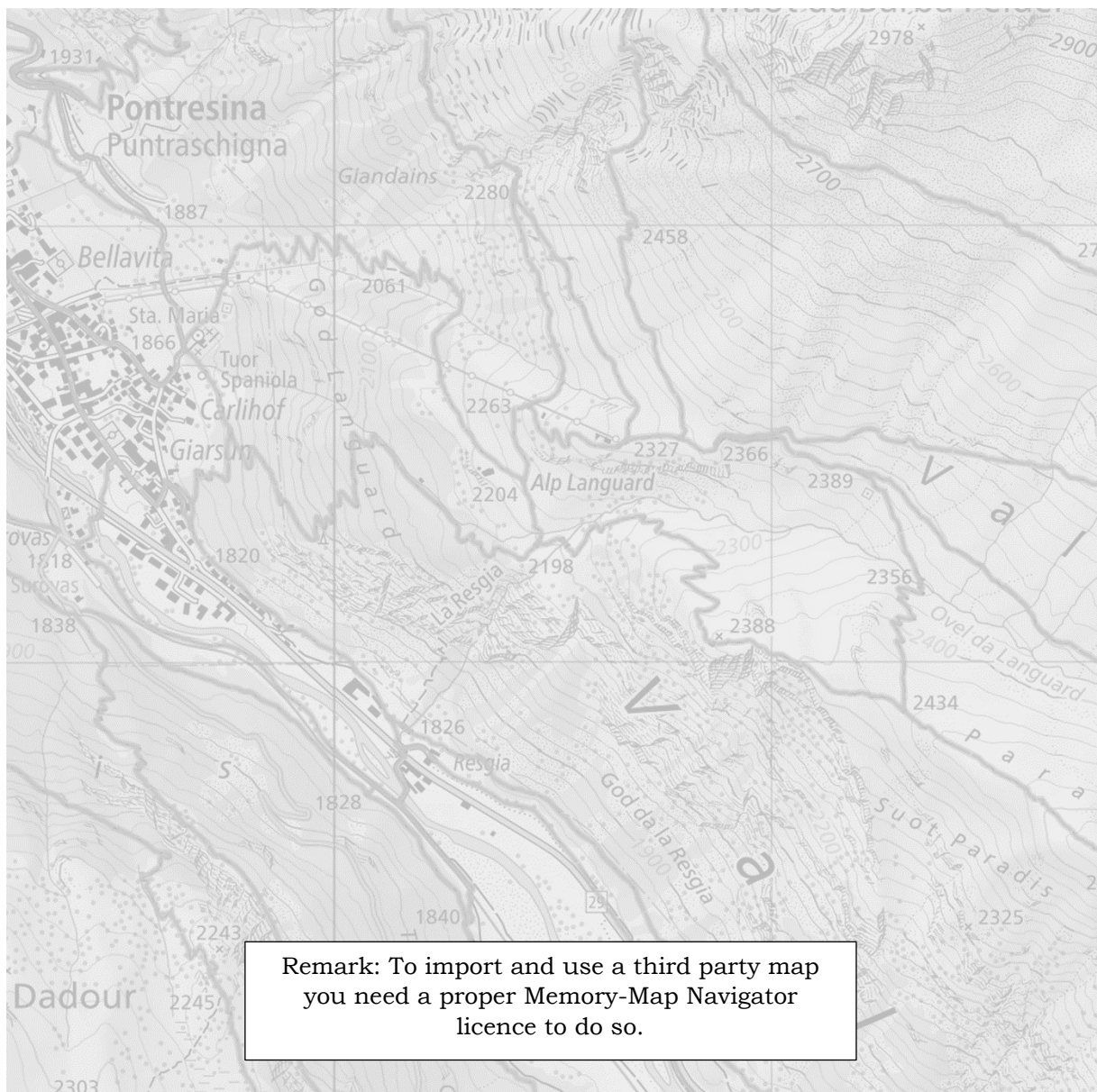


Project Maps for Memory Map (M4MM) Cover document

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Version: 1.0.0 (Pontresina) July 1. 2022



Change log

This change log covers the whole project; documentation and application.

Version	Date	Remarks
0.6.0 (Zwolle)	August 6. 2021	First full initial version of the project, including the complete documentation and the application M4MM. It replaces all earlier versions.
0.7.0 (Woombah)	November 1. 2021	<u>New:</u> <ul style="list-style-type: none">• scale selection when building a JPR-file. <u>Changed:</u> <ul style="list-style-type: none">• Data structure JPR data (resolution and scale).• Handling image files (maximized to 2 G Byte of pixel data).• Location of file selection and print controls.• Opening file selection when opening information, build or edit forms• Redesign of Image Information Form (integration with Image View Form).• Implementation combo box Scale in the building forms.• Text Cover document and Cookbook relate to changes above. <u>Fixed (major):</u> <ul style="list-style-type: none">• Some comment lines in JPR-files.• Saving JPR-file from Ozi MAP-file.•
0.8.0 (Blaine)	November 21. 2021	<ul style="list-style-type: none">• Project ported to Visual Studio 2022 Community (Visual Basic) and .NET framework 4.8.• 64 Bit application.
0.9.0 (Whistler)	March 15. 2022	<u>Added:</u> <ul style="list-style-type: none">• Added ITRF92, ITRF2008 and GDA94 to application.• Instructions for the graphics application GIMP. <u>Updated:</u> <ul style="list-style-type: none">• Paint.Net instructions (to latest version 4.3.8) in the Cookbook. <u>Changes:</u> <ul style="list-style-type: none">• Translation of geographical coordinates to pixel coordinates in application.
1.0.0 (Pontresina)	July 1. 2022	<ul style="list-style-type: none">• Review and updated “The Cookbook”.• Review and updated the Technical document.•

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Introduction

The purpose of the project ‘Maps for Memory-Map’

The purpose of the project ‘Maps for Memory-Map’ (M4MM) is to make more maps available for the application Memory-Map by giving users the information and the tools to calibrate and/or convert existing maps with or without calibration data into the Memory-Map native QCT-file format.

Why (this project)

As a Memory-Map user I am keen to collect maps which I can use with Memory-Map. Strolling the internet I discovered the amount of ready to use maps are scarce. This mend I had to calibrate the maps myself, a time consuming job with a lot possibilities to make mistakes. But I found a third option, looking for maps which were already calibrated and which could converted into a format Memory-Map could understand’. This was the start of project ‘Maps for Memory-Map. Although projects primary goal is Memory-Map, AlpineQuest®, PathAway® and FUGAWI® users aren’t excluded.

The project boundaries

To prevent the project to become an ever growing cauliflower (a Dutch saying) I have to set the boundary of the project. So the project covers:

1. Calibrating a map with the Memory-Map functionality (including setting the boundary of the map).
2. Adding other grid configurations which can be used to calibrate
3. Converting GeoTIFF-maps to QCT-maps
4. Converting GeoPDF-maps to QCT-maps
5. Converting MrSID-maps to QCT-maps
6. Converting OziExplorer maps to QCT-maps (including maps created using Mobile Atlas Creator (MOBAC))
7. Modifying the Memory-Map calibration JPR-file

No part of the project documentation is a replacement for the [Memory-Map manual](#). “The cookbook” must be seen as an addition and extension to this manual. An alternative or an addition to the Memory-Map manual is [‘Memory Map – A User Guide’](#) by the Stuart W. Greig ([lonewalker.net](#)).

The application Maps for Memory-Map (M4MM)

A part of the project is the application M4MM which is, in essential, a conversion tool. A simple conversion tool is more or less: “translate A in B” and that’s it. Mostly it isn’t that simple. A is often not exactly the same as B or there isn’t always a B or there isn’t an A for every B or vice versa, etc., etc. It was a challenge.

The history

In 2019 I started the project to develop some little applications to convert OziExplorer MAP-files to Memory-Map JPR-files and to extract calibration data from GeoTIFF- and GeoPDF-files to create Memory-Map JPR-files. In 2020 I made the step to integrate these applications and develop a more inclusive project based on workflows. In 2021 the project became mature; all documentation in place and the application in its last beta versions.

To version 0.6.0

This version was the first full release; with application M4MM and the user and technical documentation. In this version two main issues were not solved: first the loading very large images to extract image data like height/width, resolution and color depth and second the printing in one go instead of printing page by page.

To version 0.7.0

In this version the image issue was solved as far as the limitations of Visual Basic studio allows.(image size of 2 G byte of pixel information). This lead to the redesign of the image information form and the code which handles image information. The Image View Form became obsolete.

The second big change was the implementation of a combo box for adapting the scale in the building forms.

The third visual change the way forms which needed file selection as first step. This step will be initiated when opening a form.

Under the bonnet there were code changes. Obsolete code was removed, redundant code was concentrated on one location and on some locations the code was streamlined. All with the main purpose to ease the maintenance.

To version 0.8.0

The only purpose of this version is the change of the development environment (Visual Studio 2022) and the step to 64 bit application.

To version 0.9.0

The first significant change is the move to Windows 11. The application is build, compiled and tested in a Windows 11 environment.

The second change is the handling of pixel coordinates. These changes are described in the Cookbook and the Technical document and also implemented on the application.

The Cookbook is updated for the current versions the third party software. GIMP was added as graphics application.

To version 1.0.0

This is the formal release of the project. “The cookbook” and the Technical document were reviewed. No features were added.

The content of the project

The project is the following objects:

1. This cover document.
2. “The cookbook”: The users documentation with workflows for the different processes, the explanation of the application M4MM, the explanation of some Memory-Map functionality and the explanation of the functionality of third party applications.
3. The application M4MM with all the files to in install.
4. The technical documentat: more or less the acknowledgement for the design, development and building of the workflows and application M4MM.
5. The application code.

Disclaimer/Copyright/Legal stuff

Maps for Memory-Map (M4MM)

The project M4MM provided information, and tools 'As is'. The use of the information and tools is on your own risk. Direct or indirect damage by using this application is users responsibility/risk, not the application-builders, even if you get lost somewhere in the bush. Redistribution by a third party (commercial of non-commercial) is prohibit. Download the application direct from <https://www.hzns.nl>.

The information used to build the tools for the project M4MM was collected from open sources, manuals and observations of the behaviour Memory-Map. The code of Memory-Map was never reverse-engineered, decompiled or disassembled.

GDAL

The tools of the project M4MM use GDAL/OGR which licensed under an MIT/X style license with the following terms: Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the 'Software'), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

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Limitations

M4MM

To create the workflows, explanations and application, information from open sources was used as well the users manuals from the applications mentioned in documentation. Those sources were not always conclusive and sometimes contradictory. In other cases I had to observe the behaviour of the applications to understand the working or to make a best guess about it. This means the information in the project M4MM is not always complete and maybe not fully correct. I did what I could.

The application M4MM is built with Visual Basic 2022/Windows Forms App (.Net framework), a part of Visual Studio, which has its own limitations. One of them is the maximum size of images (about 2 G byte/based on trial and error). This means M4MM can handle an image with a color depth of 8 bit (1 byte per pixel) of 2 Giga Pixel (about 40,000 by 50,000) or with a color depth of 32 bit (4 by per pixel) of 500 Mega Pixel (about 20,000 by 25,000).

GDAL

The application M4MM uses some functions of the GDAL environment OSGeo4W. One of them is `GDALINFO`, used to extract Geographical data form GeoPDF-, GeoTIFF- and MrSID-files in the data format Well Known Text (WKT) 2.0. GDAL version 3.0.4 (or higher) is able to do so.

Memory-Map

To create QCT-maps you need a proper licence [Memory-Map Navigator](#) to import third party maps.

To import an image file in Memory Map it must have a color depth 8 bit (256 colors) or less.

Timetable

Version 0.6.0 (Zwolle) of the project was frozen on July 15. 2021 and compiled and published on August 6, 2021.

Version 0.7.0 (Woombah) was frozen on October 19. 2021 and compiled and published on November 1, 2021.

With version 0.8.0 (Blaine) the application was ported to next version of visual studio community 2022 (Visual basic) and will be 64 bit. It was frozen, compiled and published on November 21. 2021.

Version 0.9.0 (Whistler): the application will be ready for Windows 11 and is the (last) release candidate before 1.0.0. it was frozen on march 1. 2022 and published on March 15.

Version 1.0.0 is the formal release. This version was frozen on June 13. 2022, compiled on June 30. 2022 and published on July 1. 2022.