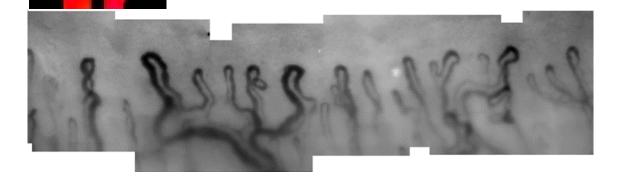
NCM Capture Software 2.1.0 User Guide



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This software is recognised as beta software, distributed for free by the University of Manchester to aid research in nailfold capillaroscopy. It must not used for any commercial activities. The software has been tested to the best of our knowledge and we are using a copy of the software in our own research lab. However the software comes with no formal guarantees, and the software is to be used entirely at the users own discretion and risk.

Until a formal license for distributing the software is released, please do not forward copies of the software without the express permission of the author Michael Berks (The University of Manchester).

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Chapter 1: Introduction

**** This user guide is currently still under construction ****

While it is being completed you may wish to use the Quick Start Guide to get started with the software, a copy of which can be downloaded from here (it is also packaged with the software).

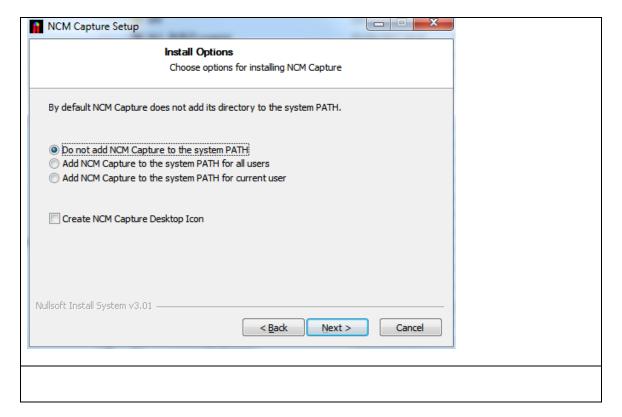
For all help enquires please contact Michael Berks at the University of Manchester, via email at michael.berks@manchester.ac.uk

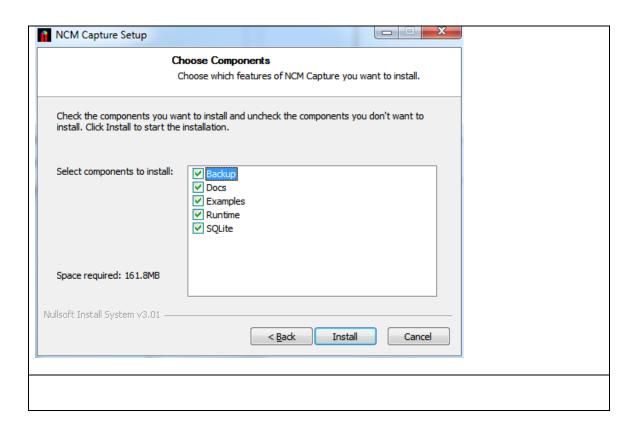
1.1 Overview

Text here.

1.2 Installing and Starting the software

The Quick Start Guide packaged with the software (it should open on the first time you run the software) describes how to install and open your software for the first time.





Chapter 2 : Data organisation

2.1 Overview

To use the software you require a user account. The software is comes with an existing admin account created, to which you can add further user accounts. Each time you use the software, you must log with your user account. All activities (eg capturing new images) you perform whilst logged-in will be recorded and tagged with your user ID, provided a full track record of how the software has been used. Further details of user accounts are provided in section 2.2.

Ultimately, the aim of the software is to generate high quality nailfold mosaics. To understand how these are generated, and so you can best understand how to use the software, the remainder of this chapter provides a brief overview of the hierarchical structure in which image data is organised in the software.

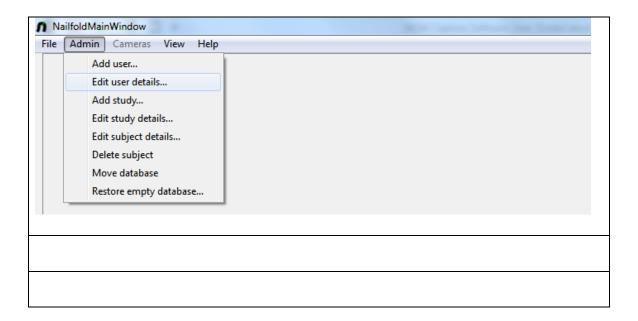


Figure 2-1: Hierarchy of data in the NCM Capture software

Details of all user activities and data are stored in a single database file. A copy of the database with some pre-existing users, studies, sessions and sequences is packaged with the software. As per the instructions in your Quick Start Guide, when you first log-in to the software you will be asked to copy this database file to a location for which you have write access on your local machine's hard drive. This file is very important and is described in detail in chapter Chapter 7.

2.2 Users

The software comes with a pre-existing admin account, with a preset password Nailfold2017! that you can use to log-in to the software. We suggest you change this password to something more secure. To do this, go to the Admin menu on the main menu bar and select Edit user details.



2.3 Studies

Studies are at the top of the hierarchy. The software has been developed with research imaging in mind

- 2.4 Subjects
- 2.5 Sessions
- 2.6 Sequences
- 2.7 Mosaics
- 2.8 Analysis

Chapter 3 : Capturing Images

- 3.1 Starting a session
- 3.1.1 Selecting an existing subject
- 3.1.2 Creating a new subject
- 3.1.3 Camera start mode
- 3.2 Loading a camera
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Chapter 4 : Processing Sequences

- 4.1 Overview
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Chapter 8 : User Preferences

- 8.1 A Tab
- 8.2 B Tab
- 8.3 C Tab
- 8.4 D Tab
- 8.5 E Tab

Appendix A: App1

A.1 App section 1

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A.2: App section 2

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A.2.1 App sub-section

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| Appendix B: App 2 | | | | | | |
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| Figure B.1: | | | | | | |

Glossary of Terms

Acknowledgements

This software has been development as part of a joint research project between The University of Manchester and Salford Royal NHS Foundation Trust. The following people have made major contributions its development:

- Michael Berks
- Phil Tresadern
- Graham Dinsdale
- Andrea Murray
- Ariane Herrick
- Chris Taylor
- Tim Cootes
- Tonia Moore
- Jo Manning

The project in which the software was developed was kindly sponsored by the Wellcome Trust (grant..). In addition work carried in a parallel project sponsored by the Raynaud's and Scleroderma Association (now Scleroderma and Raynaud's UK) made invaluable contributions to the work.

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Publications

The software....

- Michael Berks, Graham Dinsdale, Andrea Murray, Tonia Moore, Ariane Herrick, Chris
 Taylor. <u>An Automated System for Detecting and Measuring Nailfold Capillaries</u>. In

 Medical Image Computing and Computer-Assisted Intervention -- MICCAI 2014 pp 658665
- Michael Berks, Graham Dinsdale, Andrea Murray, Tonia Moore, Ariane Herrick, Chris
 Taylor. <u>Improved Diagnosis of Systemic Sclerosis Using Nailfold Capillary Flow</u>. In

 Medical Image Computing and Computer-Assisted Intervention -- MICCAI 2016 pp 344352