Status of GRUAN Documentation

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Status of GRUAN Documentation

Outline:

- Status Radiosonde Fundamental Document
- Further documentation:
  Current drafts of GRUAN TNs and TDs
- Joint editing of GRUAN documents

Radiosonde fundamental document

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- Chs. 1-3: (Christoph) Description of:
  - Technical and organizational basics for the operation of radiosondes within GRUAN
  - Description of the measurands and sensor techniques
- Contents largely created; Small improvements in some places since ICM-10

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- Chs. 4 / 6: not yet started
- Ch. 5: (Masatomo) Operational measurement practice;
  First revision done; In progress
- Ch. 7 / 8: (Michael) Description of:
  - Concepts for radiosonde GDP
  - Data management within GRUAN
    (file formats, metadata, data flow, archiving, distribution,
    monitoring, software)
  - Detailed outline exits

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9.2 Quality assessment and feedback 76
10 Radiosonde change management 77

- Ch. 9: Quality assessment; Response to stations and users (*outbreak session yesterday*)
- Ch. 10: (June) Description of rules for management of instrument changes; In process

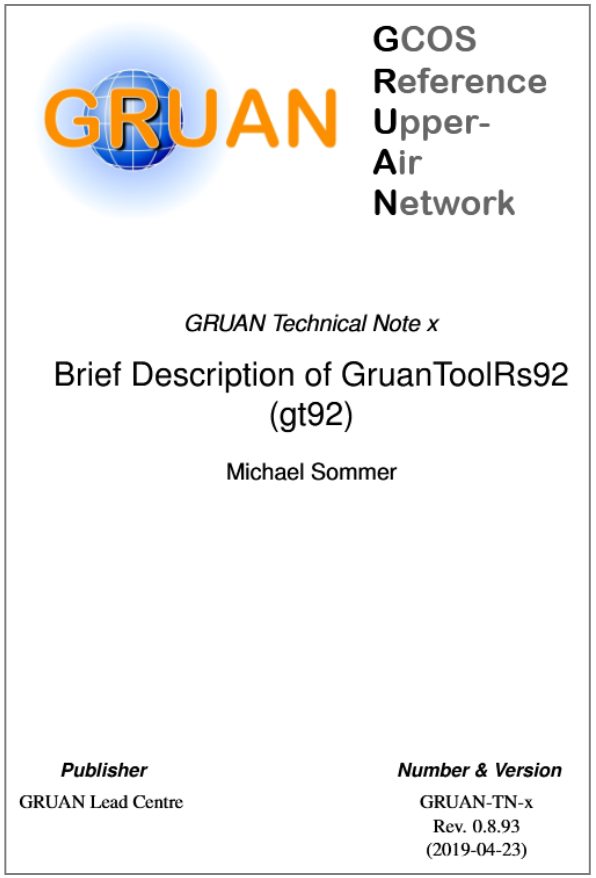
- Originally intended: First GRUAN reviewable version in Jan. 2019
- Achieved:
  - Small text progress in some places
  - Detailed outline / structure for data-related contents
  - Document format converted to LaTeX
- Reason for current delay:
  Highest priority at RS41-GDP development incl. experimental work and documentation

Radiosonde fundamental document

Next steps

- Joint review of current status (all authors):
  - Find balance between general or fundamental and specific or technical contents
    (document not to long, 100-120 pages?)
  - Relate contents to GRUAN
- Prepare list of topics / sections that can be edited by other members of the community
- Find a way how site experience can be recorded
- Find volunteers for contributions

Further GRUAN documentation:
Drafts for Technical Notes


GRUAN GCOS Reference Upper-Air Network

GRUAN Technical Note x

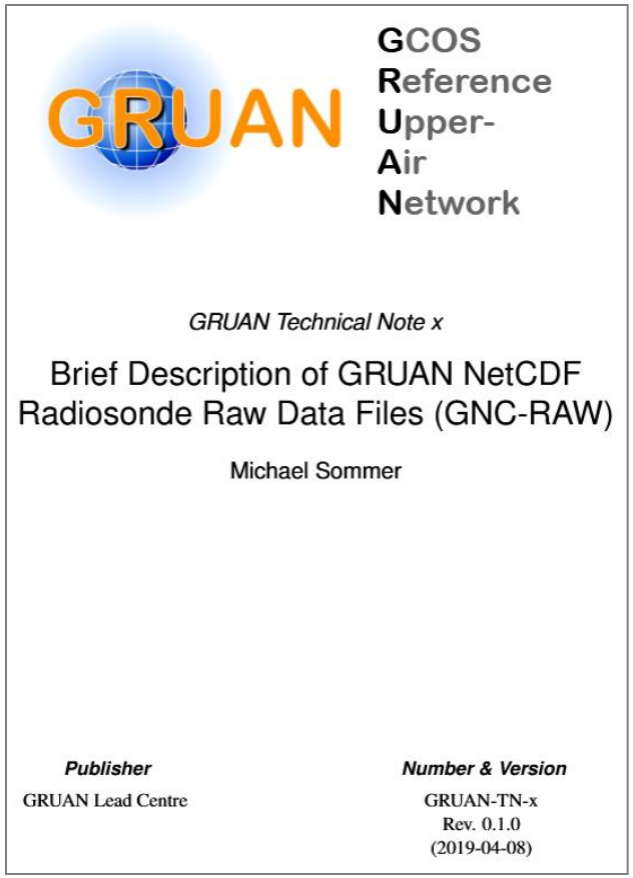
Brief Description of GruanToolRs92 (gt92)

Michael Sommer

Publisher
GRUAN Lead Centre

Number & Version
GRUAN-TN-x
Rev. 0.8.93
(2019-04-23)

Conversion and extraction of tables and meta-data from several (proprietary) file-types;
some data manipulation and check features


GRUAN GCOS Reference Upper-Air Network

GRUAN Technical Note x

Brief Description of GRUAN NetCDF Radiosonde Raw Data Files (GNC-RAW)

Michael Sommer

Publisher
GRUAN Lead Centre

Number & Version
GRUAN-TN-x
Rev. 0.1.0
(2019-04-08)

Description of GRUAN NetCDF Radiosonde Raw Data Files as manufacturer-independent format for raw data archiving


GRUAN GCOS Reference Upper-Air Network

GRUAN Technical Note x

Brief Description of GruanToolRsLaunch (gtRsl)

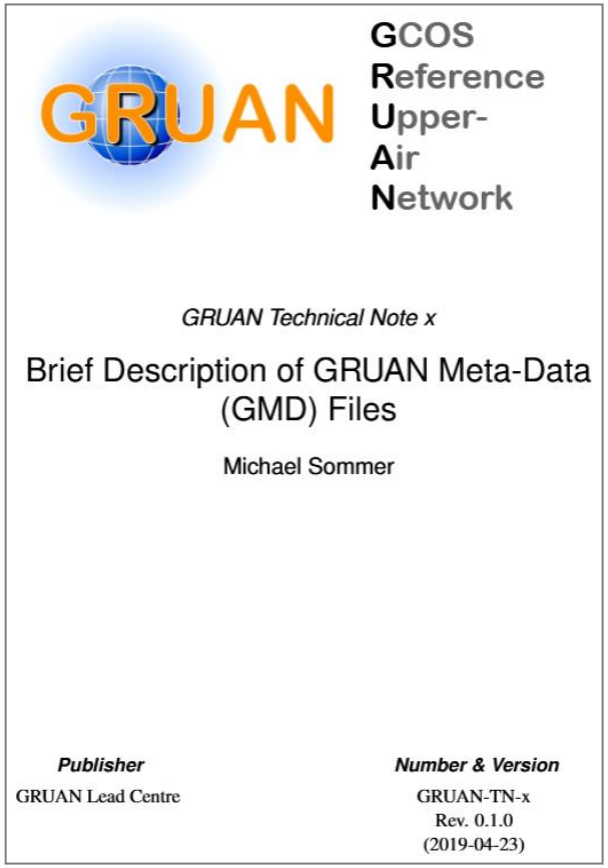
Michael Sommer

Publisher
GRUAN Lead Centre

Number & Version
GRUAN-TN-x
Rev. 0.5.0
(2019-04-23)

Automatic creation of GRUAN meta-data (GMD) files for radiosonde launches;
Tool preferably for use with auto-launchers

Further GRUAN documentation:
Drafts for Technical Notes


GRUAN GCOS Reference Upper-Air Network

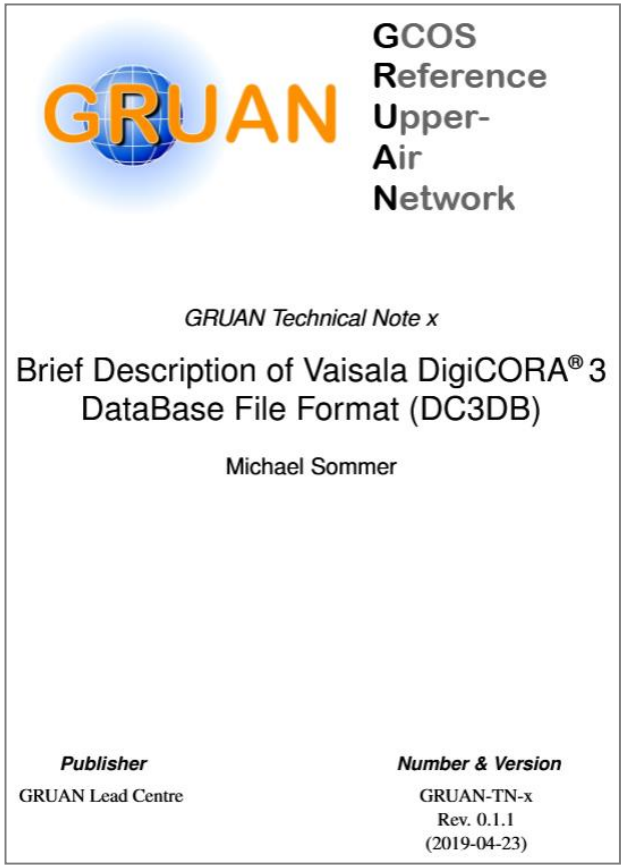
GRUAN Technical Note x

Brief Description of GRUAN Meta-Data (GMD) Files

Michael Sommer

Publisher	*Number & Version*
GRUAN Lead Centre	GRUAN-TN-x Rev. 0.1.0 (2019-04-23)

Description of GRUAN Meta Data (GMD) file format (XML) for transmission of meta-data; obligatory for import of measurement data into GRUAN data archive


GRUAN GCOS Reference Upper-Air Network

GRUAN Technical Note x

Brief Description of Vaisala DigiCORA® 3 DataBase File Format (DC3DB)

Michael Sommer

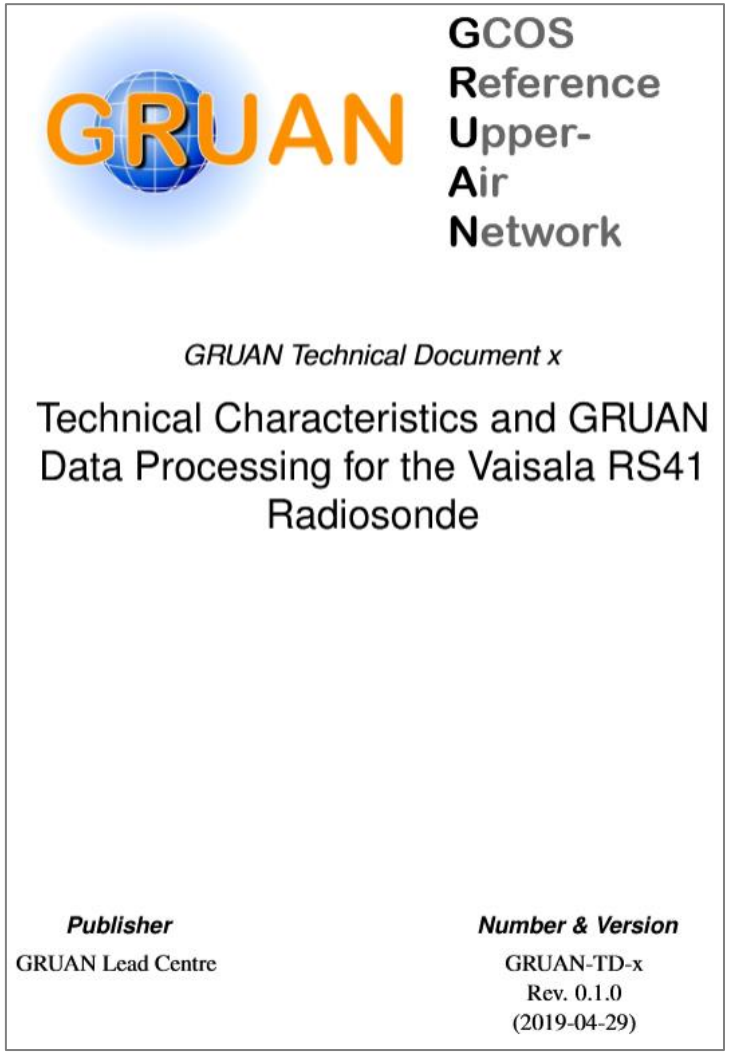
Publisher	*Number & Version*
GRUAN Lead Centre	GRUAN-TN-x Rev. 0.1.1 (2019-04-23)

Description of Vaisala DigiCORA® 3 data base file format (DC3DB), created by Vaisala DigiCORA® sounding systems MW31 and MW21; (currently >50 000 files in archive !)

Further GRUAN documention required (not yet started):

- Data processor (GDPS)
- Data management server (GDMS)
- Meta-data base (GMDB)
- File archive (GFA)

Further GRUAN documentation: RS41-GDP


GRUAN
GCOS Reference Upper-Air Network

GRUAN Technical Document x

Technical Characteristics and GRUAN Data Processing for the Vaisala RS41 Radiosonde

Publisher
GRUAN Lead Centre

Number & Version
GRUAN-TD-x
Rev. 0.1.0
(2019-04-29)

Currently drafts for 3 parts written:

- RS41 GRUAN Data Product (RS41-GDP) - History of changes during product development since Version ALPHA.1
  (M. Sommer)
- Estimation of humidity time lag for the Vaisala RS41 radiosonde
  (C. von Rohden, T. Naebert)
- Temperature uncertainty components for the Vaisala RS41 radiosonde
  (C. von Rohden, M. Sommer)

Joint GRUAN document creation

- LC acts as publisher and editor for GRUAN (TN, TD)
- LC strives for more efficient and easier way of joint creation of documents
- LC proposes the use of Overleaf service (https://www.overleaf.com):

  Online platform (text editor) for collaborative authoring tools, based on LaTeX; Allows creation and management of projects; real time collaboration; track changes; comments; document history
- Prerequisites for users: Overleaf account (free), web browser, basic knowledge in LaTeX
- LC has contract with Overleaf (up to 10 authors per document)
- LC takes over user management (opening of docs to co-authors), creates templates for GRUAN documents, takes over editorial work
- After (ongoing) test phase, LC plans to make it accessible to GRUAN