



MDF 4 EXPERIENCES / ENHANCEMENT PROPOSAL

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Public

MDF 4 - OVERVIEW

- **Flexible** File format
 - one Measurement per file (Meta and Data information)
 - “like” database in one file
 - “**complicated**” structures - **combinations**
- Storage optimized Format
 - Opt. on bit level for data loggers (memory dump)
 - but talking about GB files, BIG Data, ...
- Smart Concepts like
 - Events
 - Preview
 - Compressing data
 - Lookup tables
 - ...

AVL EXPERIENCE WITH MDF4

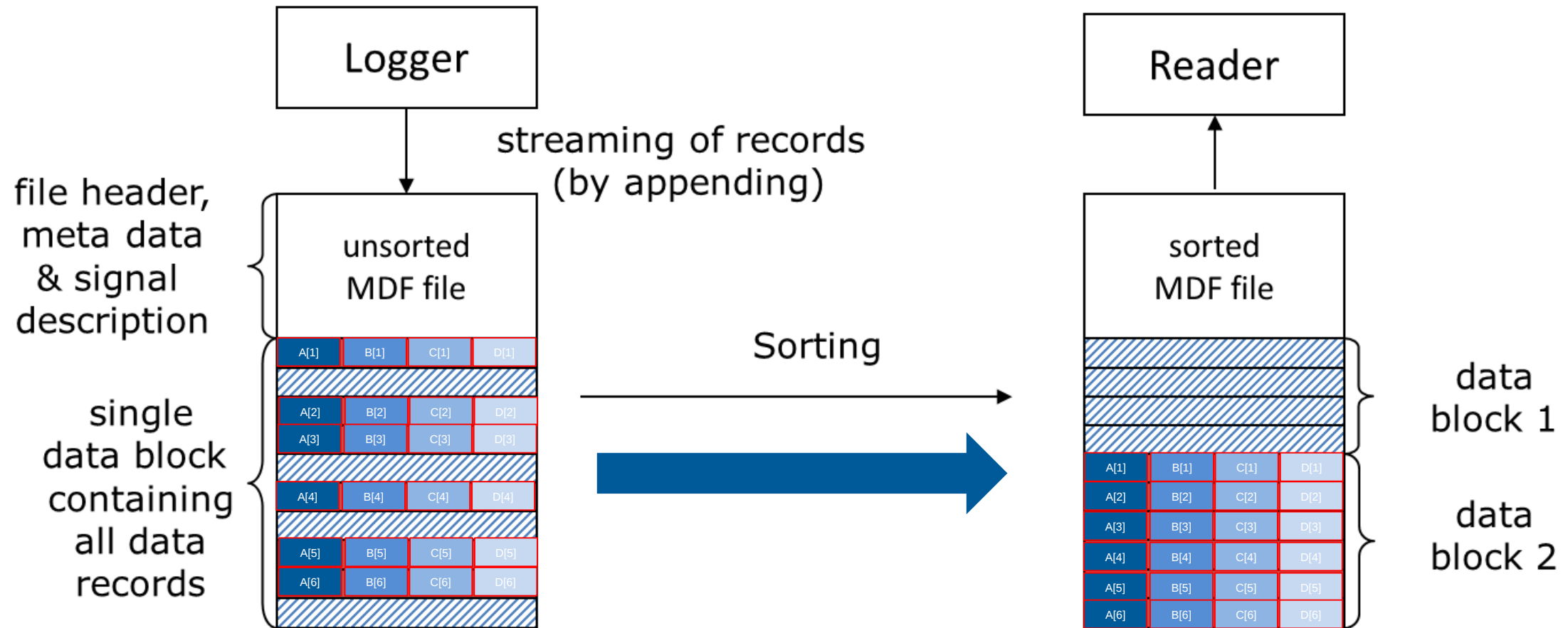
- Writer (Logger) optimized
 - ODS usage: Prerequisites defined by ASAM ODS are necessary
- “not” user-friendly for Data processing (Evaluation clients)
 - has to implement additional Logic ... for faster access
 - without “sorting” not useable
 - MDF file needs to be “transformed”, to guarantee fast access
- Handling
 - Attach MDF files to AoMeasurements or AoSubTests
 - Currently no direct reading by ODS Server, because of limitations
 - No direct manipulation of MDF by other tools, because of ODS Mapping structure !

Goal

Optimize for **End – User Usability** (Data Processing)
and not for storing components

- Optimize file for Data Evaluation process
 - **Transform MDF file**
 - Sorted
 - Channel oriented
 - Compressed Data blocks
 - Stays MDF File
- Why Channel oriented and transforming ?
 - Because Data evaluation is based on particular Channels
 - **Accessing the file** for Evaluation is done
 - **multiple times by multiple End - Users**

MDF SORTING



MDF IN ODS ENVIRONMENT

Context is changed - from Local to **Server based** processing

Client	Server
1 user	~ 50 users
~ 10 Meas/ user	~ 10 Mea/User => 500 Meas
~ 50 Channels / Mea => 500 Channels	~ 50 channels / Mea => 25.000 channels
Files accessed directly (harddisk, SSD)	Files accessed via IT Infrastructure (network, NAS, ...)
	Factor 50 more file access, file positioning

MDF CHANNEL WISE SORTING

