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MDF Sorter

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ODS-Server Restrictions

- ODS has channel attributes for
  - Start offset
  - Value offset

- ODS has no opportunity for
  - Changing value offsets in between one channel in external component
  - Compressed/transponed data blocks ➔ upcoming

MDF4 Format

- Sorted MDF4
  - Only one channel group (CGBLOCK) per data group (DGBLOCK)
  - All channel values in data block (DTBLOCK) have fixed length
  - Compressed/transposed data block (DZBLOCK) allowed

➔ Readable in ODS with current/upcoming ODS-Specification

- Unsorted MDF4
  - Data group (DGBLOCK)

    Contains mutliple channel groups (CGBLOCK)

    ➔ Randomized order of channel values

    Contains variable length signal data channel groups (VLSD CGBLOCK)

    ➔ Value offset unsufficient
  - DLBLOCKs split channels into mutliple data blocks

    ➔ Value offset unsufficient

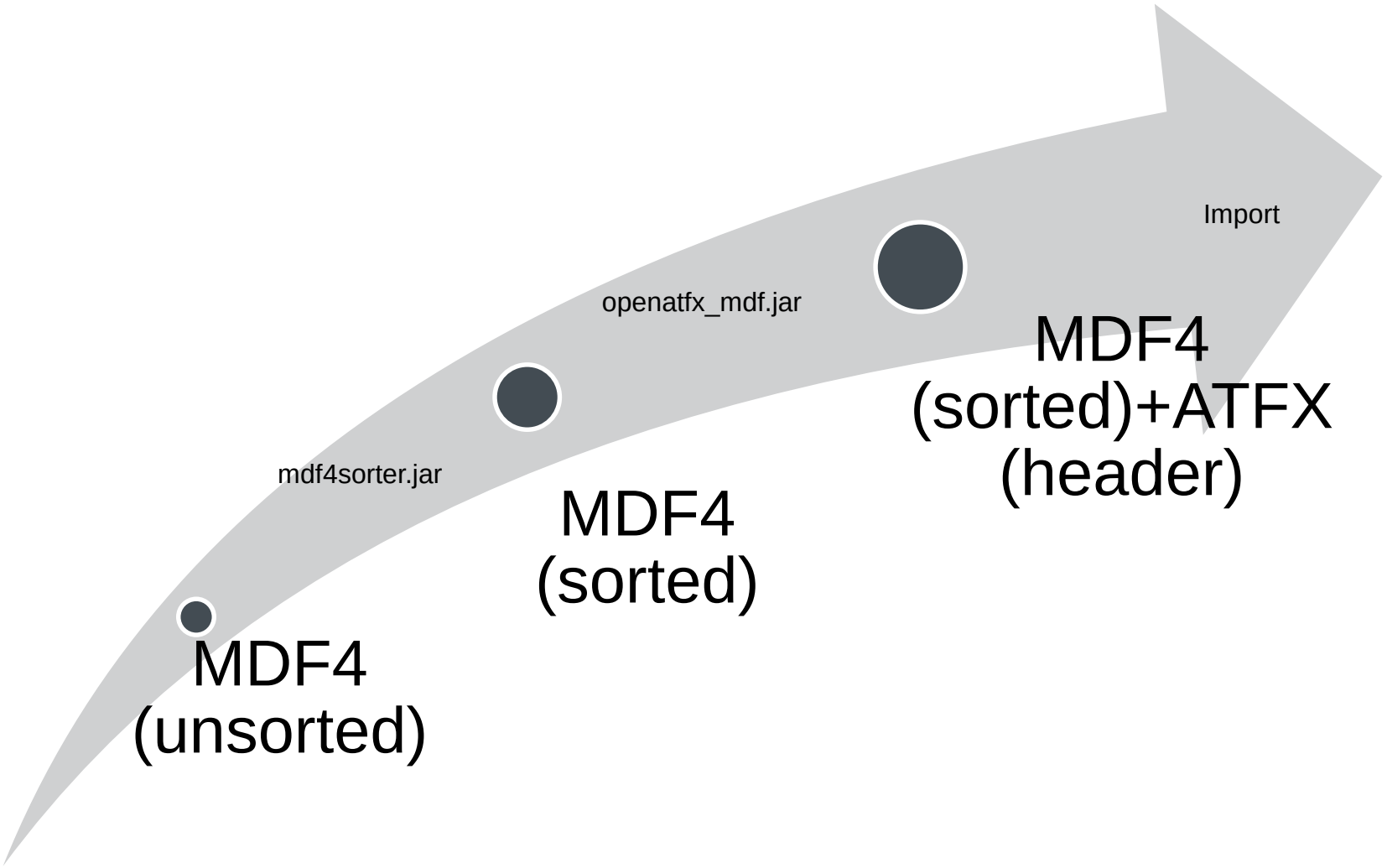
MDF4 Sorter

- Java library, CL- and Java-Interface
- Developed by AUDI
- Supports MDF3 & MDF4.x files
- Pretty fast (few seconds / GB)
- Features
  - Sort MDFs to single CGBLOCK per DGBLOCK
  - Extract variable length channel values (VLSD) to SDBLOCKs
  - Zip & unzip data blocks
  - Set block size limit

OpenATFX MDF Converter

- Java Library
- Creates ATFX Files
  - Conains header information of MDF file
  - Links channel data as external components

Process



Limitations

- Data lists (DLBLOCK)
  - Data lists are reduced, but possibly not omitted (max blocksize limitation)
  - Recursions in DLBLOCKs can cause heap error (about more than 5000 recursions)
- Processing UINT64 Values not possible at present due to Java Datatype restrictions (Long type ist signed)
- CABLOCKs not yet supported
- Solution for SDBLOCKs not clarified

Publishing

- Components will be published on openMDM Eclipse Working Group
  - Currently in review

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Vielen Dank.