



BudLUG 2024-2

Budapest LabVIEW User Group, 2024-09-19



Szervezők

Orth Alán
Balogh László

Knorr Bremse Hungária Kft.



- Balogh László** : **Parquet fájlok használata LabVIEW alatt**
- Alan Orth** : **NI-DAQmx driver érdekességei hardware absztrakció során**
- Nagy Balázs** : **Instrument Studio, Plug-in fejlesztés LabVIEW alatt**
- Szili Ferenc Ádám** : **Teszt szekvenciák tesztpadfüggetlenítése**
- Király Sándor** : **Konfigurálható plugin struktúra objektum orientált környezetben**

Van téma ötleted? Kedved?





TechDays, Hungary 2024

Register Now!

Date: 05/11

Location: Budapest

Venue: Aquaworld Resort Budapest



Automotive TechDay @Budapest

2025 January

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Using Parquet Files in LabVIEW

Wikipedia:

Apache Parquet is a [free and open-source column-oriented](#) data storage format in the [Apache Hadoop](#) ecosystem. It is similar to [RCFile](#) and [ORC](#), the other columnar-storage file formats in [Hadoop](#), and is compatible with most of the data processing frameworks around [Hadoop](#). It provides efficient [data compression](#) and [encoding](#) schemes with enhanced performance to handle complex data in bulk.

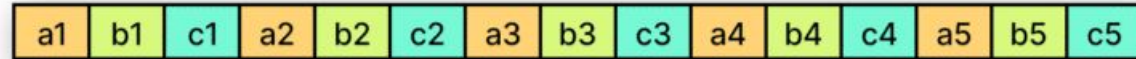


Parquet

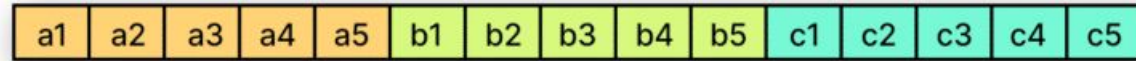
Logical table
representation

a	b	c
a1	b1	c1
a2	b2	c2
a3	b3	c3
a4	b4	c4
a5	b5	c5

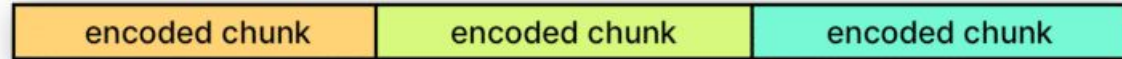
Row Layout



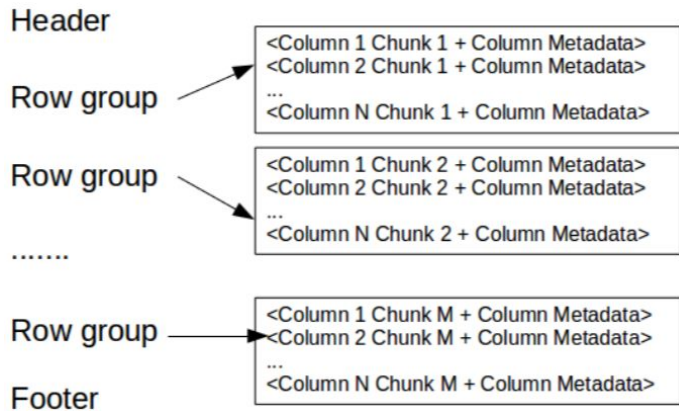
Column Layout



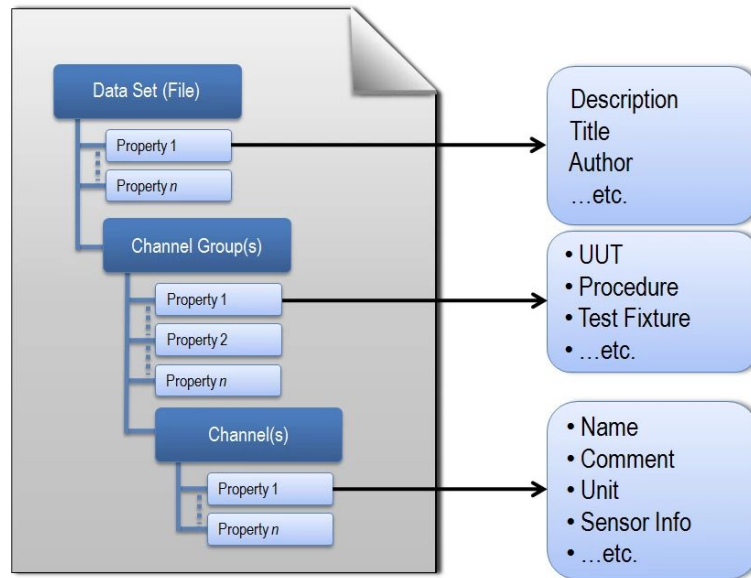
encoding



Parquet File



TDMS File



- **official/original implementation: C++**
- **C# wrappers:**
 -
 - Parquet.Net
 - ParquetSharp



Cons

- **Designed for compile time structure definition**
- **Same length for columns**
- **Fixed order of writing columns**
- **ParquetSharp: only 64 bit**

- **Specific use (Waveform)**

Pros

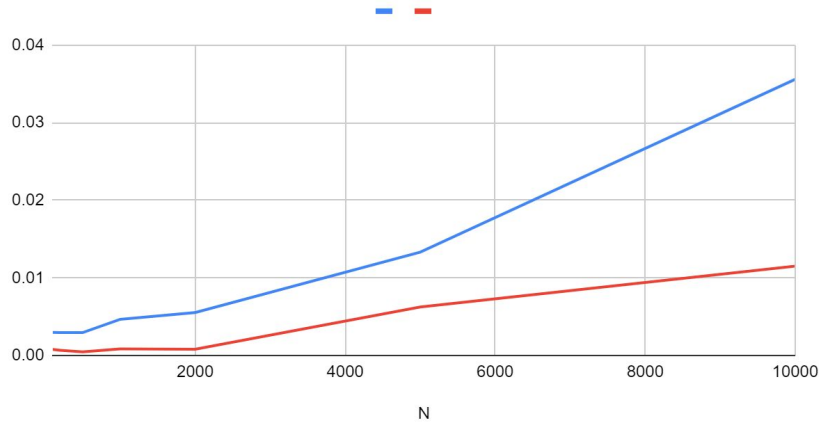
- **Straightforward use**
- **Not just in NI world**
- **Encryption**



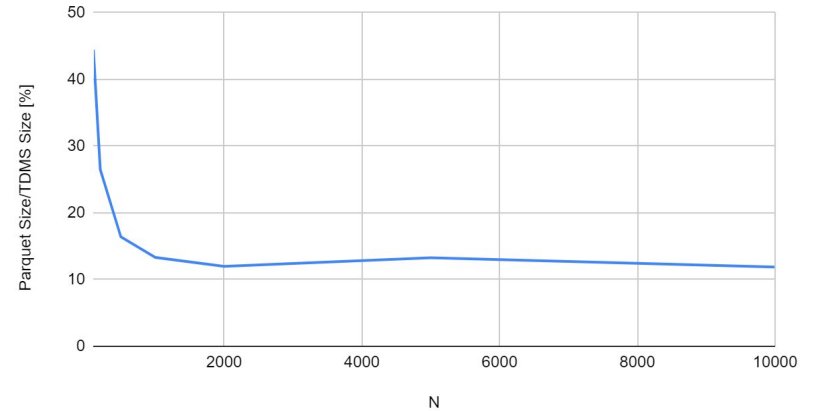
Writing Performance

- **Time**
 - 5 - 10x slower than TDMS Write
- **Size**
 - 5% more than TDMS

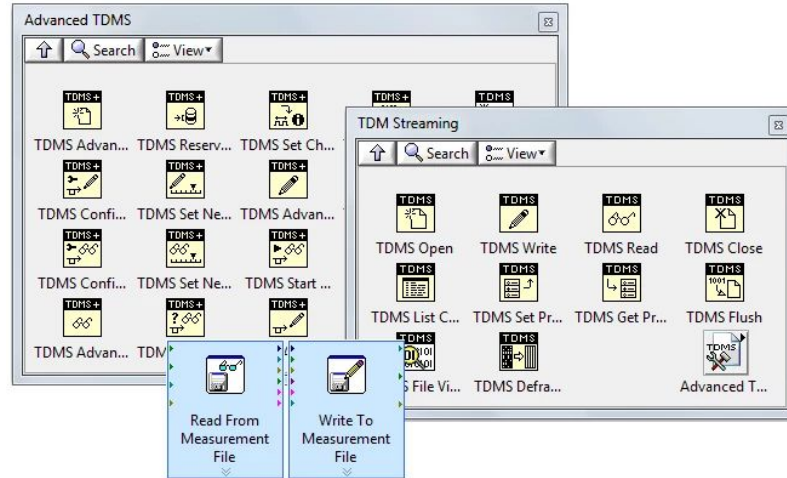
Parquet/Writing Time (ms) and TDMS/Writing Time (ms)



Parquet Size/TDMS Size [%] vs. N



- **Staying in NI world:**



- **Acceptable cons and work later in cloud:**





Kérdések? Bármí....