

**Synchronization readout of properties:** how to make synchronized monitors of 2 or more properties?

## Example

I have a BACI property (Alt), and another (Az). I'd like to have both the same trigger / timestamp because they are naturally belonging together.

## Issue

- It seems that the only solution is to pack the data in an unnatural sequence. And we should depart from standard SxD to label what is in each sequence entry.
- This doesn't work if the two types are different, e.g. String and float

## Possibilities

- Add a BACI c-style structure type to ACS
- Synchronized triggers at the component level - how? (devIO, other).
  - Extend completion with 2 timestamps, 2nd one being source timestamp should be easy at least for Java/Python.
- Set synchronization via client/callback?
- Use the "Sampling System" overkill?
- Notification channel – **The preferred way in ALMA used for scientific flow**
- Using a STRING property and serialize and deserialize - could work in low frequency
- CORBA Method/query + Reading the source data source.

## Related

- Chaining timestamps from the source to properties - instead of generating them by ACS.
- Out of the box only works by using a sequence
- Using the time as another property - needs the correlation with another property
- longLongSeq? (and ulongLongSeq) sequences could be extended in ACS - probably not complicated but not existing
- could encode in a longLong and use 2 parts, 32 bit for value and 32 for timestamps - for high frequency