WCT changes for Imaging

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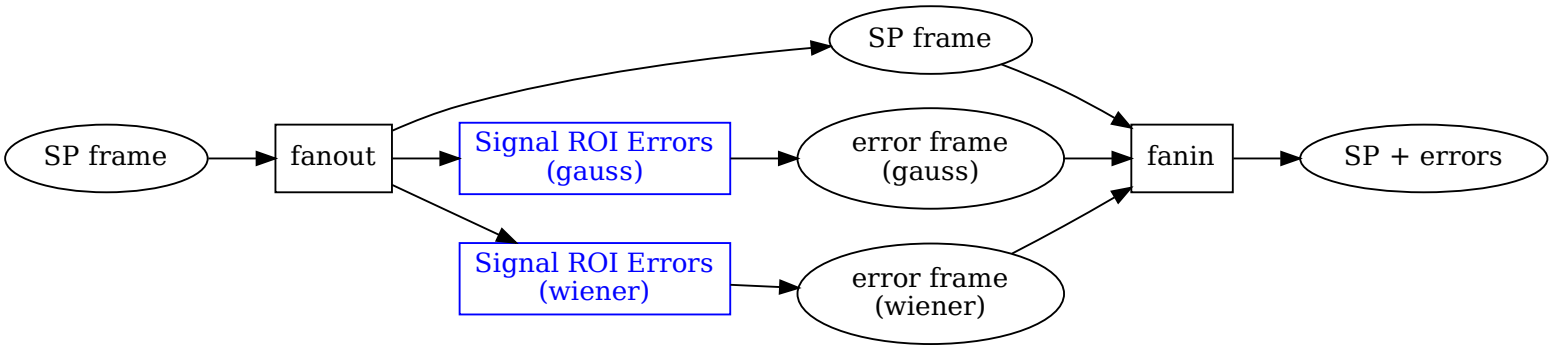
Charge error

Each signal-ROI *charge* has some associated uncertainty *charge error*.
We must:

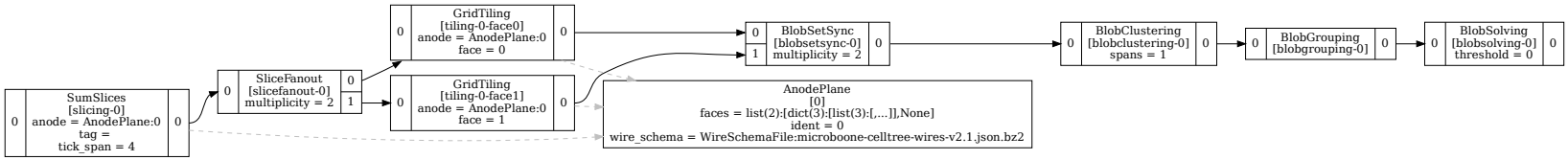
- Form charge error in some way.
- Make both available for downstream nodes.
- In particular, use in *charge solving*.

New charge error subgraph



The "Signal ROI Errors" node is an `IFrameFilter` (Xin working on it). Note, it does **not** forward its input. We use fanout/fanin instead.

Current WCT imaging chain



Add:

- The “charge error subgraph” feeds this one.
- New `MaskSlices` (Haiwang it) to apply “bad channel mask map”
  - will replace `SumSlices` in above graph

ISlice changes

Change current value type in map: channel → value:

```
class ISlice {

  using value_t = float;
  typedef std::pair<IChannel::pointer, value_t> pair_t;
  // ...
};
```

To a new type:

```
class ISlice {

  using value_t = WireCell::measure_t<float>;
  // ...
};
```

Measure type

This will be a copy of Boost's example `boost::units::measure`.

- https://www.boost.org/doc/libs/1_78_0/libs/units/example/measurement.hpp
- A number-like object with value pairs: "central" and "error".
- Has `operator+()`, etc to perform basic uncertainty propagation.
- **No math function support**, eg no `exp()`.
- Can downgrade to a simple scalar.

Regressions to fix

We will need changes to:

- Extend `ISlice` (as just shown)
- Extend `SumSlices` and `MaskSlices` to fill value and error.
  - need to add a `err_tag` config option
- Make sure current `BlobSolving` and other `ISlice` users are okay with new type.
- A new `ChargeSolving` class will implement WCP alg to finally make use of this new error value.