tf.contrib.signal.frame

```
frame(
    signal,
    frame_length,
    frame_step,
    pad_end=False,
    pad_value=0,
    axis=-1,
    name=None
)
```

Defined in `tensorflow/contrib/signal/python/ops/shape_ops.py`.

See the guide: Signal Processing (contrib) > Framing variable length sequences

Expands `signal`'s `axis` dimension into frames of `frame_length`.

Slides a window of size `frame_length` over `signal`'s `axis` dimension with a stride of `frame_step`, replacing the `axis` dimension with `[frames, frame_length]` frames.

If `pad_end` is True, window positions that are past the end of the `axis` dimension are padded with `pad_value` until the window moves fully past the end of the dimension. Otherwise, only window positions that fully overlap the `axis` dimension are produced.

For example:

```
pcm = tf.placeholder(tf.float32, [None, 9152])
frames = tf.contrib.signal.frame(pcm, 512, 180)
magspec = tf.abs(tf.spectral.rfft(frames, [512]))
image = tf.expand_dims(magspec, 3)
```

Args:

- `signal`: A `[..., samples, ...]` `Tensor`. The rank and dimensions may be unknown. Rank must be at least 1.
- `frame_length`: The frame length in samples. An integer or scalar `Tensor`.
- `frame_step`: The frame hop size in samples. An integer or scalar `Tensor`.
- `pad_end`: Whether to pad the end of `signal` with `pad_value`.
- `pad_value`: An optional scalar `Tensor` to use where the input signal does not exist when `pad_end` is True.
- `axis`: A scalar integer `Tensor` indicating the axis to frame. Defaults to the last axis. Supports negative values for indexing from the end.
- `name`: An optional name for the operation.

Returns:

A `Tensor` of frames with shape `[..., frames, frame_length, ...]`.

Raises:

- `ValueError`: If `frame_length`, `frame_step`, `pad_value`, or `axis` are not scalar.

Last updated November 2, 2017.