Idea for Codeathon - combining aao, aai and waveform functionality and bptr manipulation

Today, Zen presented a talk on asynportdriver. During the discussion, we talked about aai, aao and waveform and Steph suggested a codeathon task to combine them all into waveform and have a flag to define your own bptr. I mentioned that this can be done in waveform as is, by freeing bptr.

Here is the init routine that does that (in orange)

```
/* $Id: devWaveformLlrf.c,v 1.20 2009/06/05 00:43:09 dayle Exp $ */

/*==============================================================================

  Name: devWaveformLlrf.c

  Abs:  Device support for saving raw digitizer data into a waveform
        (4 channels into a single, row-major array).

  Auth: 10-nov-2006, Till Straumann (TSS)
  Rev:  2008 Dayle Kotturi: adapt read_waveform contents to LLRF app

----------------------------------------------------------------------------*/

#if 0
#include "copyright_SLAC.h"    /* SLAC copyright comments */
#endif

/*----------------------------------------------------------------------------

  Mod:  (see CVS log)


============================================================================*/

...

static long
init_record(void *record_p)
{
waveformRecord      *waveform_ps = record_p;
DevWfRawSigDpvt_tps    dpvt_ps;

    /* Check DB configuration */

    if ( waveform_ps->ftvl != menuFtypeSHORT )
  Unknown macro: {        epicsPrintf             (DEVSUPNAM"}
    epicsPrintf(DEVSUPNAM": FTVL is SHORT\n");

    /* Set NELM to what the driver is configured for */
    free(waveform_ps->bptr);

        waveform_ps->nelm = 4*drvPadUdpCommGetNsamples(/dpvt_ps->station_type/);
    epicsPrintf(DEVSUPNAM": NELM is %d\n", (int) waveform_ps->nelm);

    if ( !(waveform_ps->bptr = calloc(waveform_ps->nelm, sizeof(short))) )
  Unknown macro: {        /* If there's no memory we are unlikely to be able to print something */        goto egress;    }
    if ( VME_IO != waveform_ps->inp.type )
  Unknown macro: {        epicsPrintf(DEVSUPNAM"}
    epicsPrintf(DEVSUPNAM": INP is VME_IO\n");

    if ( !(dpvt_ps = calloc(1, sizeof(*dpvt_ps))) )
  Unknown macro: {        epicsPrintf(DEVSUPNAM"}
    waveform_ps->dpvt = dpvt_ps;

    if ( drvPadUdpCommDpvtInit(&dpvt_ps->drvPadUdpCommPart, waveform_ps->inp.value.vmeio.card) )
        goto egress;
    epicsPrintf(DEVSUPNAM": DPVT initialized\n");
```

```
        dpvt_ps->station_type = waveform_ps->inp.value.vmeio.card;
        #ifdef DEBUG_PRINT
        DEBUGPRINT(DP_INFO, devWaveformLlrfFlag,
          ("init_waveform: Record %s setting station to card #%d\n",
          waveform_ps->name, dpvt_ps->station_type));
        #endif

    return 0;

egress:
    waveform_ps->pact = 1;
    return -1;
}
```