WET Labs Archive Format

The structure for the WET Labs Archive data format is:

```
struct  msg {
        unsigned char destunit;  /* this must be first to agree with SDLC format */
        unsigned char pkttype;
        unsigned char senderunit;
        unsigned char modulus;  /* incremented and used only for data packets! */
        short length;   /* #of bytes used in data array */
        long origintime;  /* in milliseconds or hundredth */
        short chanbytes[9];     // from smodaps file structure
        unsigned char data[2400];
        unsigned char padding[4];  /* currently not used, padding for whatever */
};

typedef struct msg *msgptr;
```

What these fields mean is:

Destunit: Destination Unit is always 0x01

Pkttype: Packet Type is 0 (time in milliseconds) or 1 (time in hundredths).

Senderunit: Logger ID: 1-4 for DH4's and ac9Pluses

Modulus: Mod 256 counter resulting in consecutive numbers from 0-255

Length: The total number of data bytes in the data field (does not include the padding characters).

Origintime: Time in ms or hundredths (based on pkttype) since the logger started. This time signifies the start of the data packet. Any data in the packet was collected at or after this origin time and before the next packets origin time.

Chanbytes[9]: Number of bytes of data for each input channel: 0-7 (or 1-8) serial data, 8 (or 9) is analog data. The total number of bytes her equals the Length listed earlier.

Data: Up to 2400 bytes per packet. Starting with channel 0, the data from each channel follows start to finish. After the last byte of data, there are four pad characaters '####' which are used to signal the end of the data. This field is truncated at the end of data and will not usually contain 2400 bytes of data.

Padding: If the data field contains 2400 bytes, padding will contain the pad characters '####'.

These data packets are created at regular intervals from 100 ms to 1 second, selectable from the loggers host program. Their length will vary according to how much data is actually received by the data logger.