1 Caveat

A second attempt to break down the existing contents of the LX tables to their equivalent on ORACLE. Some of the polling speeds are open to discussion.

At a glance the data seems to break down in the following types:

- **Read once a fill.**
  1. **Run Number**
  2. **Nominal energy**
  3. **No. of electron and positron bunches.**
- **Regular but slow updates:**
  1. **Energy measurements**
  2. **Magnet temperatures.**
  3. **LEP luminosites.**
  4. **Power converters.**
  5. **Vacuum.**
  6. **Beam position and angle.**
  7. **RF data.**

  The idea is that one polls m_timestamp_table for each of these systems, and performs a read for a given system when one notices an update.
- **Regular but fast updates:**
  1. **Beam sizes**
  2. **Beam Currents, lifetimes**

  These can just be read at the required frequency. One is more-or-less guaranteed freshness. There is no point in going via m_timestamp_table.
- **Infrequently updated data**
  1. **Page 1**
  2. **Collimators**
  3. **Mode**

Again one polls m_timestamp_table. Alerts do exist on these tables, if one wants to use them.

2 STANDARD0

- Run Information
  - Run Number from F-CONTROL-ACTSET once per fill.
  - ModeTime,Mode from M-MODE. This will be updated on mode change only, use an alert.
  - PNom, nominal momentum from the control database via "Select control_value from f_pp_actset where pp_name = 'MOMENTUM';". Read once at being of physics.
  - No. of electron and positron bunches. From f_active_run_spec. Read once at beginning of physics.
- Energy from Hall probe. From M_ENERGY_HALL.
- Energy from Flip Coil. From M_ENERGY_FLIP.
- Energy from NMR. From M_ENERGY_NMR.
- Magnet Temperatures. Have yet to get these on measurement database.
- Beam Sizes EH_PLUS etc. From M_BEUV_DATA. The database is updated every 10 seconds, but I presume the experiments will require the beam sizes a lot less frequently. Read the table as required.
- Beam currents, from M_BCT_P and M_BCT_E. These are updated every 4 seconds. Reading every minute is more than sufficient.
- Lifetimes. As above. Get them with the same call.
- POL_PLUS & POL_MINUS; What's this?
- LEP Luminosities. From M_LEPLUMI, if you really want them. Updated in 1995 every 10s, frequency will be lower in 96. There is also a seperate LX table which contains everything (for some reason).
- Aperture Collimators. Views for each experiment have been created. Updated infrequently. Ideal for alert.

3 Standardn,n=2,4,6,or 8

- QSs (Insertion quads) Power converters. Currents returned via view V_L3_PC, V_ALEPH_PC, V_OPAL_PC, V_DELPHI_PC. These don't change during a run. Get them at the same time as correctors.

- CV and CHs. (Correctors). Power Converters. Currents read every two minutes. Poll as required, but obviously not much faster than once per two mins.
- BHABHA, ELECTRON_INT - signals from lep luminosity monitors, available on M_LEP_LUMI if you must. Update rate of this table every 30s (to be confirmed) in 96, poll at less than this rate.
- Experiements' collimators. As for apertures, same call.
- Vacuum. Not yet on database. Slow slow poll.
- ISPEC - What's this?
- Beam position and angle, from M_TURBOIP where IP_NAME = 'IP6'; Everything you need in one call. Table is updated every minute. Either poll or use alert.

4 STANDARDL

- RF frequency - from M_RF. This does not change very often at all in physics. What's ARF_1 and ARF_2?
- RF - synchrotron tunes (QS_EPLUS,QS_EMINUS). The synchrotron tune of the individual bunches are on M_RF_BT. Updated every minute.
- RF - RF units. Everything you want is on, M_RF_UNIT_DATA. This is updated every minute. Poll it at this frequency, or less.
- Variety of power converters - bends,quads,wigglers will all be available via a view. Values are updated every two minutes.
- BDLH etc, what is it, does anyone look at it?
- Bunch length isn't even available in the control room for the moment.
- ZXs aren't used anymore.

5 BCT

As for beam currents above, in the same call.

6 LEPLUMI

Single call to M_LEP_LUMI for absolutely everything.

7 LXOVER

Beam angle and position from TURBOIP. See above.

8 PAGE 1

select * from m_page1_comments where machine = 'LEP';
Not updated very frequently use alert.

9 FROM THE EXPERIMENTS TO LEP

We in operations are simple-minded folk, I don't think WE need most of what is in the individual experiments' tables. Generally the 3 or 4 background figure, luminosities, radiation and whatever else you feel we need will suffice. This open to discussion.