

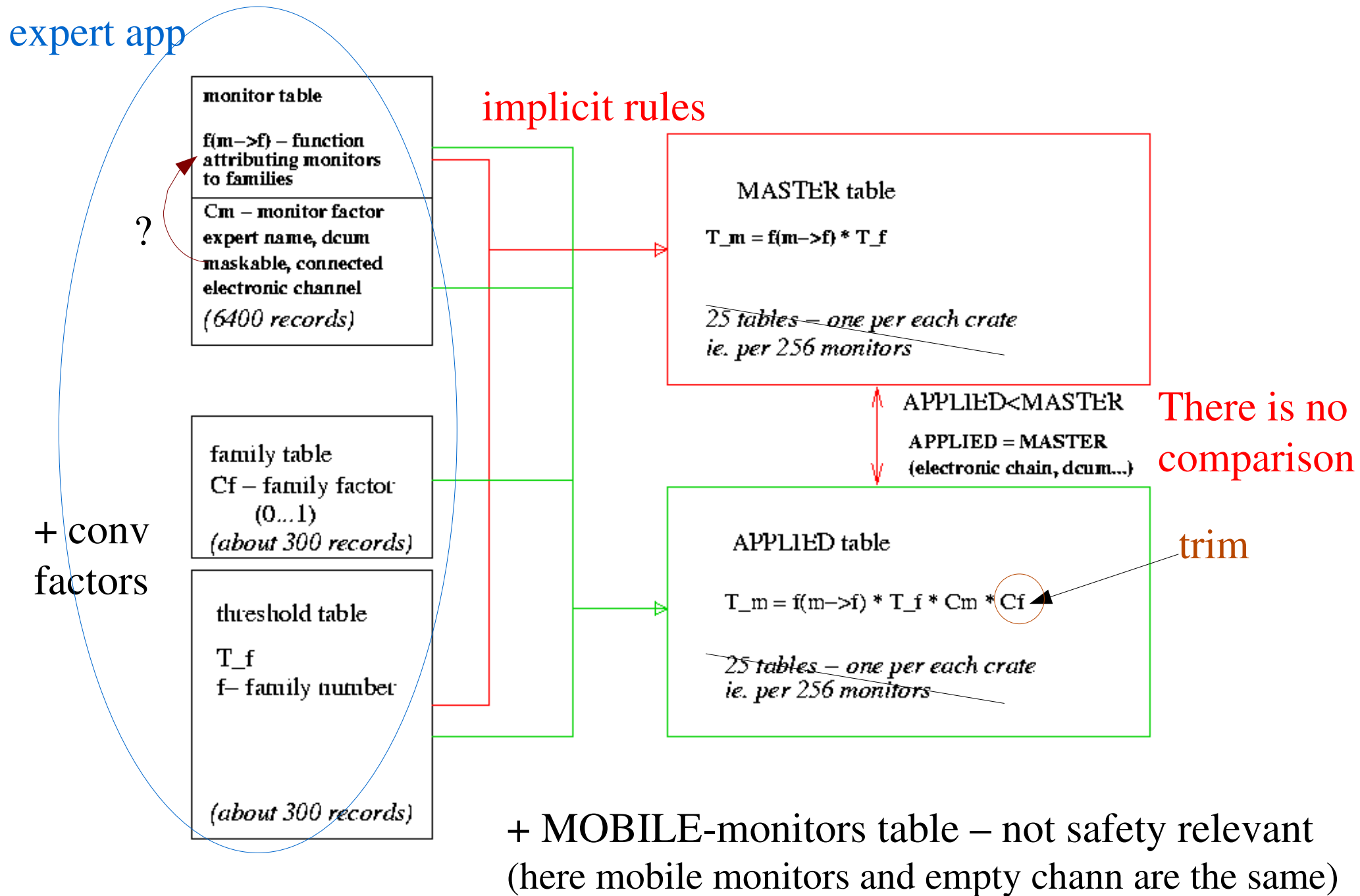
# How we modify settings AND when MASTER changes

MPS – commissioning WG meeting, 2008.01.09

# Outlook

- Current structure
- definitions/remarks
- Use cases (eg. what changes when ...)
- Answers for questions from minutes
- Proposition of modified structure after yesterday's discussion with db experts (present: Bernd, Chris, Greg, Laurette, Barbara, Anthony, Ronny)

# Present Implementation of thresholds



# Definitions and remarks

- **present structure**: a set of tables and rules in LSA Oracle database (terminology?)
- there exists a set of simple scripts which perform all needed operations on the structure (tables); java programs (trim and expert applications) are being prepared, but the structure should be established first
- Every time MASTER is changed, a snapshot of the structure is taken, if only Cf is altered history is stored via trim
- Every time MASTER changes APPLIED also changes
- Families, as understood here, are expert families and they are necessary to set and manage thresholds

# User cases (II)

7	<b>change family factor (Cf)</b>	foreseen in present structure, affects <b>APPLIED</b>	Cf
8	<b>change monitor factor (Cm)</b>	foreseen in present structure, affects <b>APPLIED</b>	Cm
9	<b>creating new family for monitors (mobile-&gt;stdandard)</b>	foreseen in present structure, affects <b>MASTER</b> unavoidable	new entry in family and thresh tables
10	<b>adding mobile monitor (empty mobile-&gt;mobile)</b>	foreseen in present structure, affects <b>MOBILE-monitors</b> only	-

# User cases (I)

1	<b>disable/remove monitor ( standard &gt; mobile )</b>	foreseen in present structure, affects <b>MASTER</b> avoidable but safety critical	expert and machine name, connected
2	<b>add a monitor ( mobile &gt; standard )</b>	foreseen in present structure, affects <b>MASTER</b> difficult to avoid and safety crit!	exp& machine, connected, dcum, maskable
3	<b>splitting existing family without threshold change</b>	not foreseen in present structure, affects <b>MASTER</b> avoidable but safety critical	family name (in all tables)
4	<b>change a monitor family</b>	foreseen in present structure, affects <b>MASTER</b> difficult to avoid	family name (in monitor table)
5	<b>change family master thresholds</b>	foreseen in present structure, affects <b>MASTER</b> unavoidable	family name (in monitor table)
6	<b>change monitor location (dcum) or electronic chain (new CFC card ... )</b>	foreseen in present structure, affects <b>MASTER</b> avoidable but desirable?	CFC card, channel BLECF, crate name, dcum

# Questions raised (from minutes)

- Can a significant increase in number of families be supported by the database? Still no answer from the CO group by the time of the meeting. **YES**
- Can the family structure be divided by sector, so that there are no ring wide families? **YES**
- What is the policy for BLM threshold settings for ion runs? **NO CHANGE NEEDED**
- Is it possible to change the threshold on an individual monitor? If so, can it only be done by the BLM expert, or are operators allowed some limited degree of adjustment?  
**POSSIBLE BY EXPERT. OPERATORS – OPEN QUESTION**

# Questions raised (Alick's mail)

**1. Do we agree on the principle of the MASTER/APPLIED table stored in ORACLE database?**

**Note that the MASTER table contains the "maximum allowed value" which will be always below the damage level)**

**2. Is the granularity of the pre-defined BLM families sufficient for Machine protection AND operational needs. I.e. What granularity is requested?**

**3. Can individual BLM monitor thresholds be adjusted (YES), and is this an operations requirement?**

**4. If the BLM expert factor only appears in the Applied table, is operations allowed to use this factor to adjust an individual monitor?**

**5. Given Safe Beam conditions, under what conditions are BLM monitors masked or disabled**

**6. Which procedure is required to disable a monitor (changes required in MASTER/APPLIED tables?) (YES, MASTER is changed, it can be avoided)**

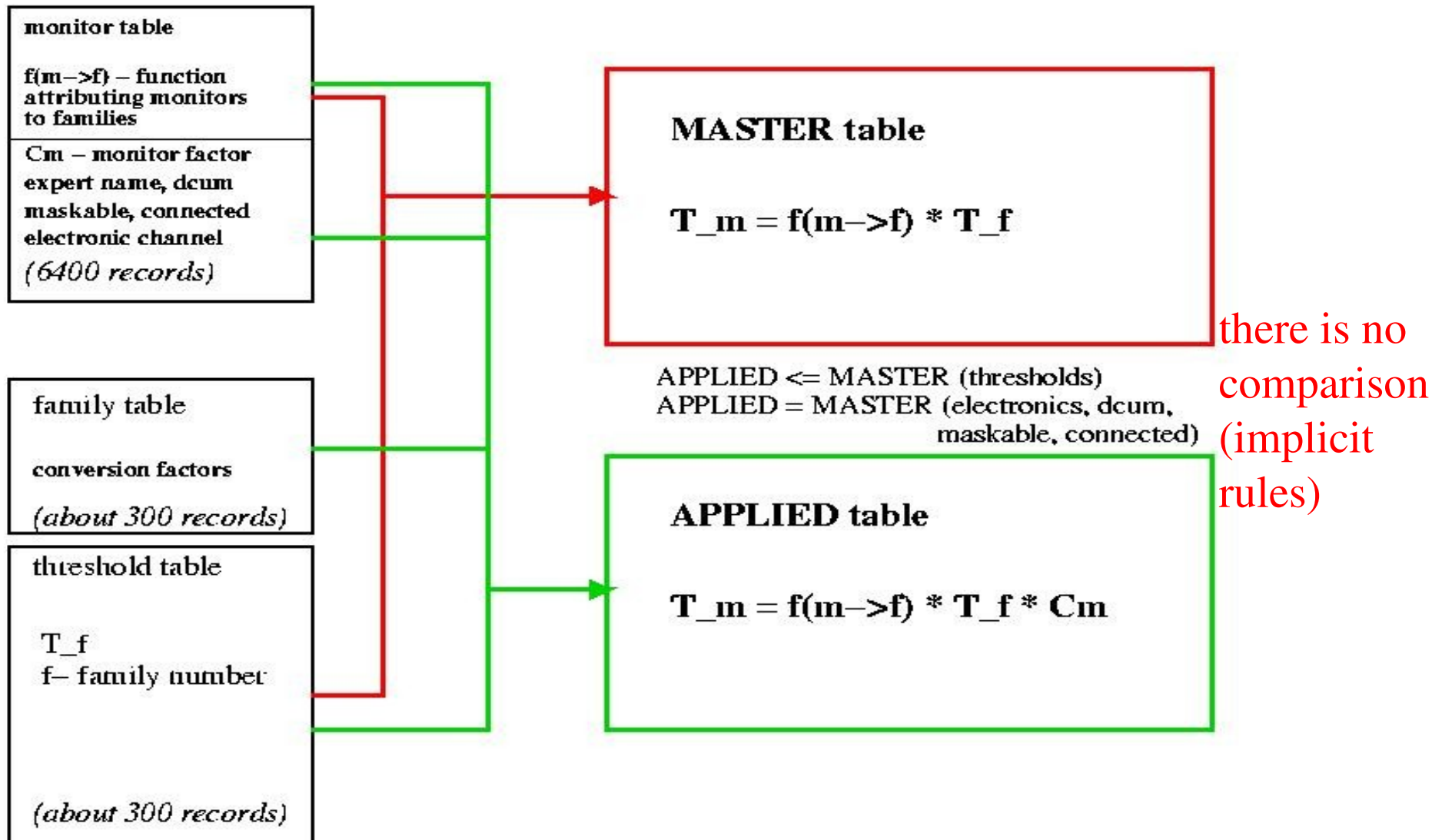


**7. Is it agreed that for cold elements we use the Safe Beam Flag Intensity (with the energy and integration time dependence) to set the proposed values for the MASTER table. For the warm elements the damage level x margin (defined by equipment owners) is proposed to be use.**

**8. Do we have agreement on a list of maskable monitors?**

**9. Is an comparison (external to the database) of the MASTER table and the APPLIED settings in front-end necessary, or is the internal database checking considered sufficiently safe. (APPLIED=front-end comparison is foreseen)**

# Implementation of thresholds – suggestions after meeting on January 8th...

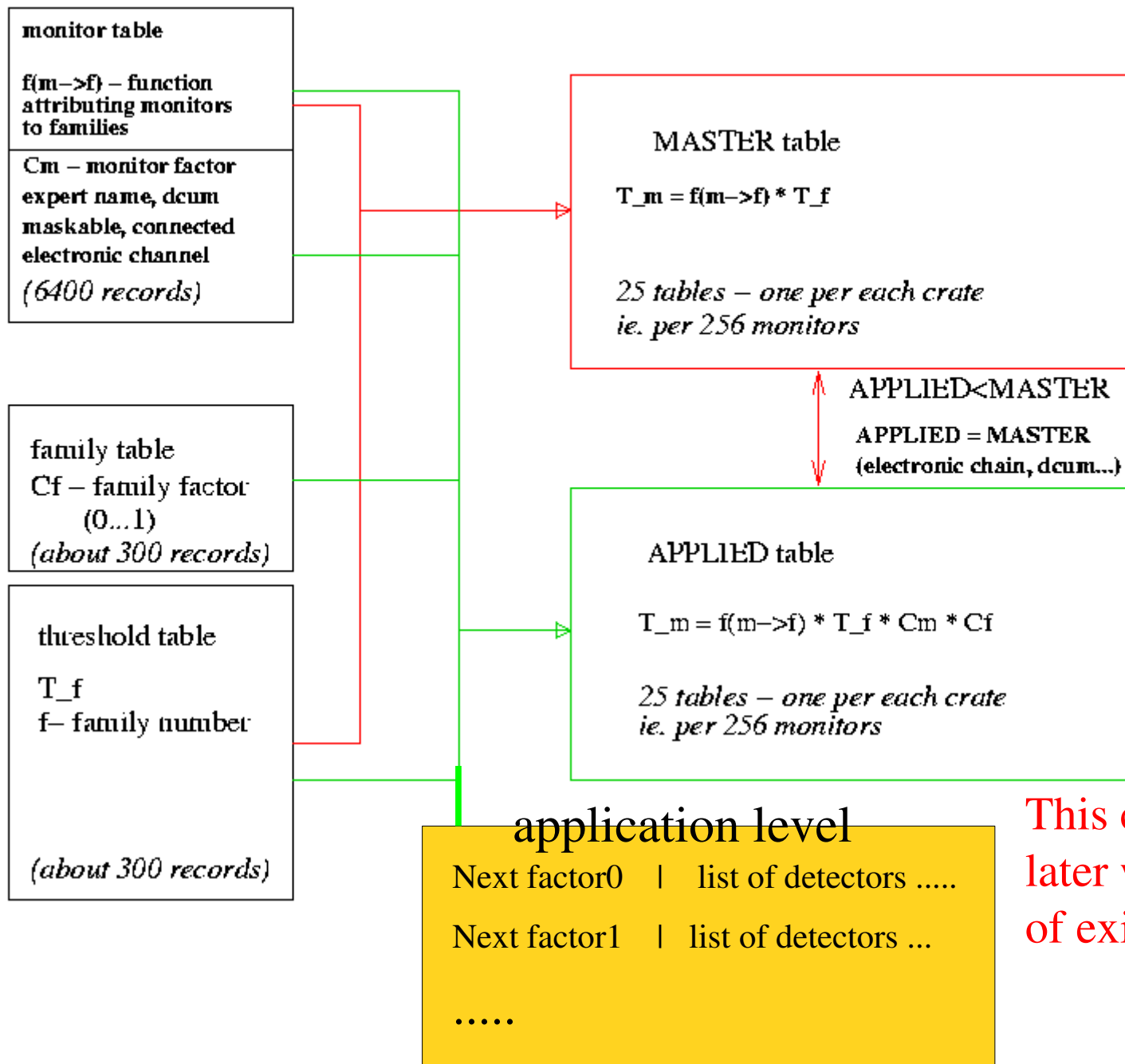


+ MOBILE-monitors table – not safety relevant  
 (here mobile monitors and empty chann are the same)

Backup slides

# Implementation of thresholds

If somebody wants to move any selected groups of BLMs...



This can be added later without change of existing structure

# Another question: can we use layout DB instead of MTF?

Fields from MTF which exists in layout:  
machine name, expert name, dcum

Fields existing in MTF:

Monitor Function

=

MASK

BLECF Identificator

->

BLECF\_ID

VME CPU Host Name

->

CRATE\_CMW\_NAME

Acq:Ra\_VME\_SI\_DAB\_In

->

CRATE\_CARD\_IDX

AnalogFE:Ra\_Cr\_CFC\_In



CRATE\_CARD\_CHAN\_IDX