# Refining a User Behaviour Model Based on the Observation of Emotional States[10]

# Report analysis was followed for investigating human error in the operation of electrical power systems company in Brazil. To analyse accidents and incidents that occurred over 10 year period.

The paper proposes Scherer’s Component Model Of Emotion for observation, recording and analysis of emotional component of operator behaviour. The model components are –

1. Cognitive appraisal: it is a quick evaluation of a situation that can direct emotional responses. The components are- intrinsic pleasure, expectation confirmation, coping potential and certainty.
2. Physiological reactions: It is based on cardiovascular, electro-dermal and respiratory measures. Heart rate, respiration rate and skin conductivity level which are measurements of anxiety, contentment, joy and fear.
3. Motor expressions are postural, vocal and facial expressions. Face Reader is an example.
4. Subjective feeling refers to unique mental and bodily experience which is experienced during a particular event by an individual and then reports it in a document.

The Protocol For Experimental Observation of Interaction is used for system-user interaction focusing on usability.

Data collection is focused on workload, attention, emotion and behaviour.

The protocol supports:

* Identification of events to be measured.
* Identification of tools.
* Structuring and data gathering process.

**Future work-**

* Evaluating theefficiency and applicability of protocol outside the critical systems.
* To investigate or compare the data gathered with respect to real working environment.

[10]Yuska P. C. Aguiar, Maria F. Q.Vieira, Edith Galy, Jean-Marc Mercantini and Charles Santoni “Refining a User Behaviour Model Based on the Observation of Emotional States”, The Third International Conference on Advanced Cognitive Technologies and Applications, 2011