## Advanced system software development process & estimation

# Auther: Lakshmi S. Patel IIT Kharagpur-CSE Ex-Amazon, MakeMyTrip, OLA, HiTekElectronics

#### 1. Abstract

Any software development process requires set of skills to achieve certain goal but when we talk about automobile industry, definitely we need veteran developer with polymath skills set because directly or indirectly life is involved. When we talk about electric vehicle where heavily mechanical process involves like motion of vehicle, breaking system etc. its require high end processing system like microcontrollers or dsp but story not end here, high end processing system does not sufficient because its bare electronics system that help to move the data and do the computation around that, to utilise high efficient computation system we need intelligent skills to design right algorithms which run in efficient ways and specific interval of time. In automobile VCU is central of computation and communication system to that all others system will share their information or data to take right action with given data set and response back in limited time. Its means that VCU is central nervous system which is responsible to quickly carrying data and also taking quick response on that so that other system like BCM, MCU, OBD, etc. with works in sync. Ultimate goal of automobile system with electronics support is to commute with intelligent system so that human being not face any hassle.

### 2. Background and Motivation

This section is the place where the scientific background of the project, previous work and motivation for the present proposal should be described. References throughout the proposal should be provided along with the text e.g., (lastname1 & lastname2, 2014, ApJ, 542, 119) or cite in the text and provide a list of references at the end of this document.

Below is an example of adding figures in your science justification.

Figure 1: figure caption to go here.

#### 3. Objectives with ASTROSAT

State clearly the primary and secondary science goals of this proposal, what actually is going to be observed and what will be extracted from the proposed observations using ASTROSAT.

#### 4. Scientific Feasibility and Justification for the requested observing time

Provide a careful justification for the target(s) chosen, requested observing time, a feasibility study (expected count rates and signal-to-noise ratios for the time requested, background estimates, etc.) and demonstrate how the observation will achieve the science goals laid out in the objectives. This section can be prepared under the following headings.

- (i) The Targets: Describe the importance of the proposed targets. If repeating, justify additional AstroSat observations. If asking for more than one target, indicate the priority in case only a subset of the proposed targets are accepted. Observations should also be requested in the same order.
- (ii) Justification for the requested exposure time: Justify the exposure time on the basis of results of Exposure Time Calculators, Simulation tools etc. Present the necessary figures and numbers.
- (iii) Scientific feasibility: Describe how these observations will achieve the stated science goals.

#### 5. Report on previous successful AstroSat proposals by PI if any

Provide a brief description on the status of observations, data availability, data analysis and publication based on previous successful proposal(s) by the PI.

6. Do you wish this proposal to be considered under AstroSat Long Term Key Project (ALTKP) ?: yes/no

# 7. Most relevant refereed publications by the proposers

List your most relevant refereed papers that are related to the subject of this proposal.

Author<br/>1 A., Author 2 B., 2010, ApJ, 599, 111: Title of paper 1  $\,$ 

Author3 A., Author4 B., 2009, ApJ, 599, 112: Title of paper2