Instituto Tecnológico de Costa Rica
Área Académica de Ingeniería en Computadores

Proyecto de Diseño en Ingeniería en Computadores

Progress report #3 for the project: Design of (ASIPs) for Approximate Computing

Chair for Embedded Systems (CES)
Kalrsruhe Institute of Technology (KIT)
Period: 19/03/2018 (week 7) - 06/04/2018 (week 8)

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1 Performed activities

1. **Familiarization with the software platform (ID 01)**:
2. **Find appropiate error-tolerant applications (ID 02)**:

2 Scope Changes

No scope changes have been made.

3 Earned Value analysis

Table 1 summarizes the gained value analysis.

Table 1: Earned Value

Activity ID	Activity	Budget	%Planned Value	PV	AC	%Completed work	EV	CPI	SPI	Initial planned date	Ending date	Initial real date	Real ending
01	Get to know the software platform	32	100%	32	30	95%	30.4	1.01	0.95	Week 1	Week 3	Week 1	-
02	Find appropiate error-tolerant applications	32	100%	32	15	70%	22.4	1.49	0.7	Week 4	Week 6	Week 4	-
	Total		100%	72	52	84%	60.8	1.16	0.84				

4 Difficulties Encountered

- The server errors have slowed down the progress of the activity 01, which should have been finished by the last report.
- The personal computer used for work got a malfuction on a fan, which prevented the use of Linux (since Windows does have a fan control driver as opposed to Linux) and thus contributed to the slow progress on the laboratory sessions.
- Supervisor Jorge Castro was busy on week 6, situation that delayed the possible approximate applications review.

5 Hard Skills Required/Acquired

- Knowledge in the following software frameworks has been acquired: Dlxsim, ModelSim and Xilinx ISE.
- Basics of the following applications have been acquired: K-means, KNN, Canny (edge detector), Linear regression, Dbscan and ID3.

6 Soft Skills Required/Acquired

The following soft skills have been excercised:

- Communication: Weekly remote communication has been performed with Jorge Castro for the guidance of this project, and with Sajjad Hussain to request technical aid in the server. With both, swift communication was achieved, each topic that was talked was resolved or clarified in very few messages (one or two at most).
- Self-Motivation: Given that there is no direct round-the-clock supervision, self-motivation has been key in working continously in the laboratory sessions and in the search of possible approximate applications.

7 Lessons Learned

It is very important to have tasks than can be parallelized because whenever something out of control (like the computer malfunctioning) stops a task, one can still advance in another activity so the general impact on the schedule is not so big.

References