



An electronic camp and design contest for high school students
October 13 – 17, 2013

Proposer : Ekachai Leelarasmee (IEEE senior member 40085056)
Chulalongkorn University, Bangkok 10330, Thailand
Email: ekachai.l@chula.ac.th

Organized by : IEEE Chulalongkorn University student branch
Pittayut Piromjit (IEEE student member 92723212)

Supporting grant : IEEE CASS Outreach Initiative 2013

Allocated amount: 2,000 \$

Number of Participants: 50 High school students (grade 9-11)
40 Electrical Engineering Students (3rd year)
1 Professor (advisor)

Expenses:

<u>Item</u>	<u>Quantity</u>	<u>Cost</u>	<u>Amount</u>
▪ Breadboard	30 pieces	20\$/piece	600\$
▪ Analog components (Battery, LED, Transistor, Speaker, etc)	30 sets	15\$/set	450\$
▪ Digital Components (Logic, Timer, Melody, Microcontroller, etc)	30 sets	25\$/set	750\$
▪ Printed Circuit Board (PCB)	30 pieces	10\$/piece	<u>300\$</u>
		Total expense	<u>2,100\$</u>

Ekachai Leelarasmee
Chulalongkorn University Student branch counselor



An electronic camp and design contest for high school students
October 13 – 17, 2013
Organized by IEEE Chulalongkorn University student branch

Activities:

- A 5 days camp to train 50 high school students about electronic circuits with hand-on experiments. The program was operated by 3rd and 2nd year student in Electrical Engineering Department of Chulalongkorn University. The training course includes
- Introduction to basic components such as R, L, C, Diode, Transistor and Logic Gate.
- Concept of analog circuits such as Series-Parallel Topology and Amplifier
- Printed Circuit Board assembly to construct a Theremin
<http://web.media.mit.edu/~silver/drawdio/>
- Digital Fundamental about combinational logic, flip-flop, counter and decoder
- C programming for PIC microcontroller
- Printed Circuit Board assembly to construct a Persistent Of Vision board
<http://www.enide.net/webcms/?page=picpov>
- Design a 4 bits modulo counter with 7-segment display

