

IPRO 353

An affordable microcontroller for students

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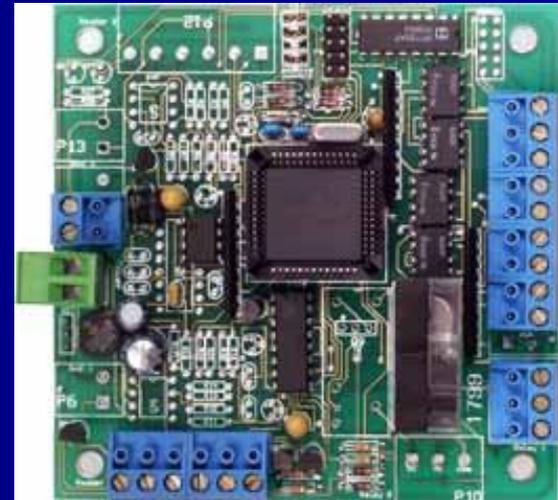
James Stine

Defining the Problem

- Individual students cannot afford their own.
- Inconvenient to share for lab.
- Improve on current standards

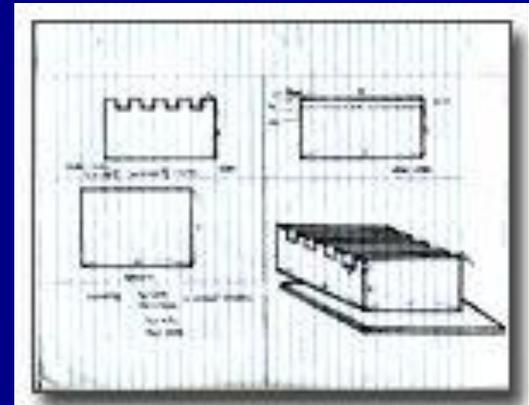
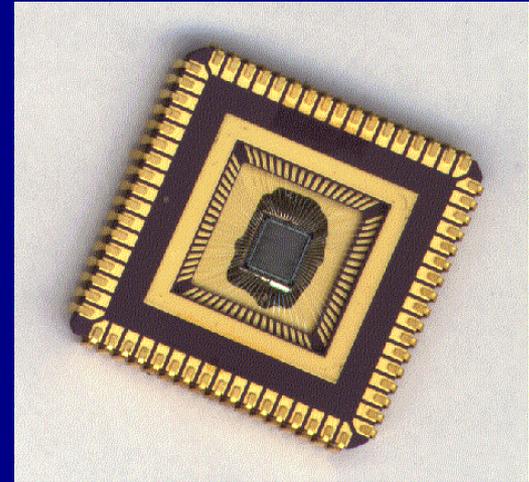
Solution

- Design and sell microcontrollers for \$99.95
- Improve on functionality and durability

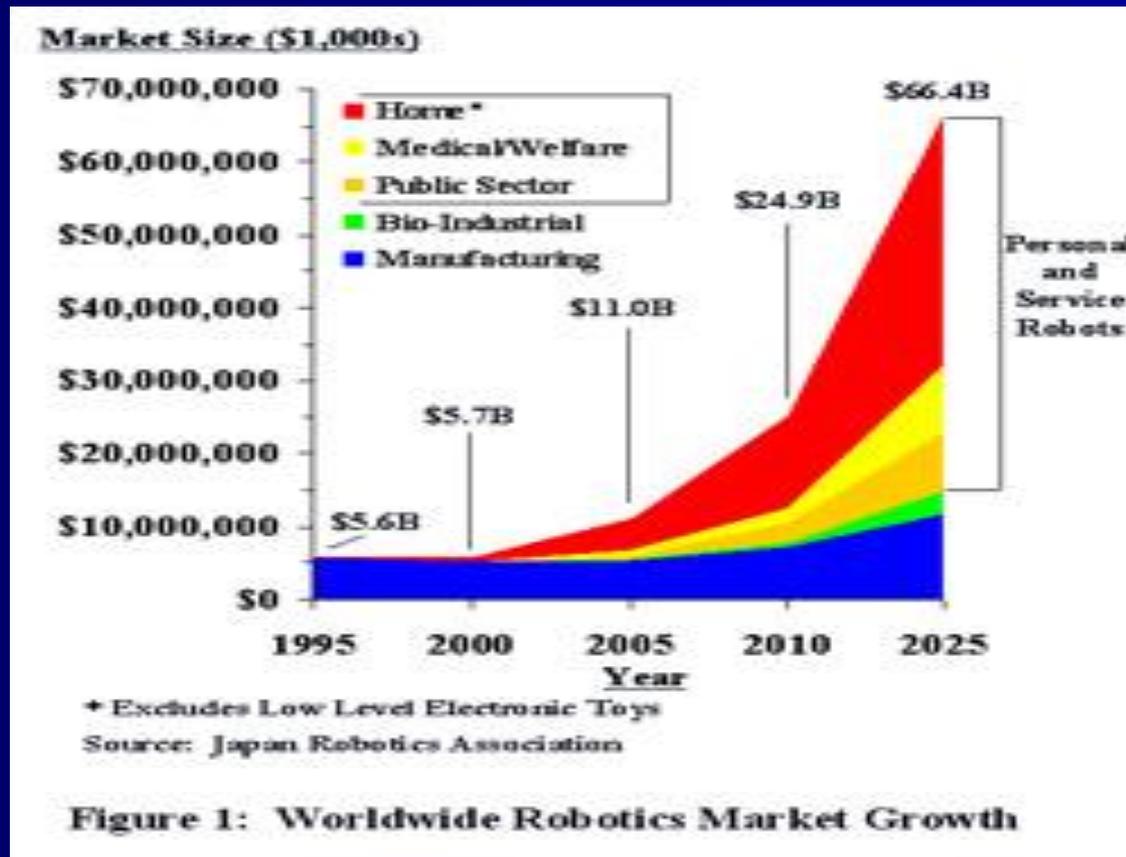


The IIT BetaBoard Features

- Designed using the Motorola HC11 Microprocessor
- GCC
- Casing
- More memory



Worldwide Robotics Market Growth



Customers

- IIT (Students of ECE 100- 60 students)
- Universities (1200 universities all over US which provides Electrical/Computer engineering)
- High Schools (inspired by robot competition)

Business Model

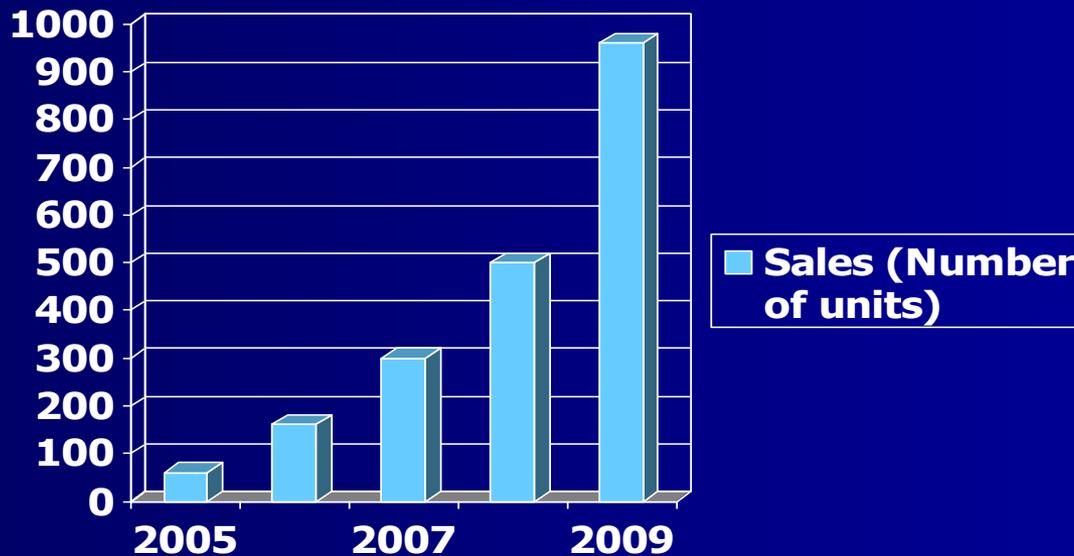
- Establish as small business
- Design microcontrollers
- Outsource for manufacturing/assembly
- Use IIT for research and development

Market Potential

- 1200 Colleges with Electrical/Computer Engineering
- Total potential of 250000 students
- At \$100 each, that is \$25,000,000

Expected Sales

- Start with 60 IIT freshmen
- Sell to nearby schools after first year
- Achieve significant growth thereafter



Competitors

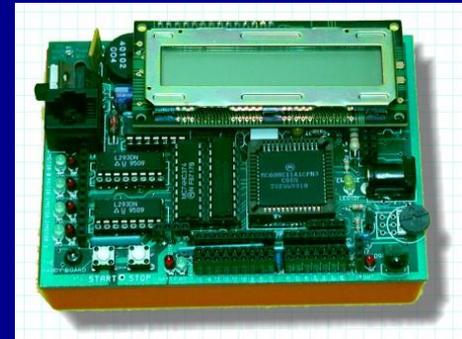
Lego

- Large company
- Expandable kits
- Lacks sophistication
- Geared towards younger students
- Expensive (\$200+)



Handyboard

- Established in robot community
- Fragile
- Short battery life
- Expensive (\$300)



Market Strategy

- Use IIT ECE 100 class to beta test and serve as reference
- Use IIT First Robotics Club to explore potential and promote product
- Sell in university bookstores
- Sell and promote online

Profit Analysis

	<u>Per Unit</u>	<u>100 Units</u>
Revenue	\$100	\$10000
Sales and Marketing	\$28.00	\$2800
Design Develop, G&A	\$30.00	\$3000
Parts, Assembly, Freight	\$15.00	\$1500
Profit Margin	\$27.00	\$2700

Custom design order of 100 units, figures in \$

Risks

- Profitability Risk
- Competition / Standards
- Investment Risk
- Teamwork & Continuity
- Lack of Intellectual Property

Recommendations

- University-supported business
- Local part-time staff
- Direct mail and internet promotion
- Distribute through college bookstores



The IPRO Experience

- Interdisciplinary
- Adaptability
- Good learning experience

IPRO

It takes a team

INTERPROFESSIONAL PROJECTS PROGRAM

QUESTIONS?

Thank you for coming
from the
IPRO 353 TEAM