MILPITAS HIGH SCHOOL TEAM MXR EXTREME ROBOTICS

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Milpitas High School Team-1120
AI Robotics Club "Rookie at its Best"

Mission

Artificial Intelligence Robotics Club is for young robotics and engineering enthusiasts at **Milpitas High School.**

2003 Objectives

- To compete in 2003 **FIRST**[1] **Regional** on March 27-29 at SJSU with *MXR* Robot (*Milpitas Xtreme Robot*),
  - Complete operational robot. To win !
- Presented FIRST & sponsors at **School Council, Milpitas Board of Education, Milpitas City Council**; press-coverage by **Milpitas Post**
- Learn robotics, software programming, and engineering concepts from a practical, hands-on point of view. **As of 3-29, qualified for National competition, at AstroDome**

Competition Timeline

- Jan-4 Game unveiled, Kickoff Event. Parts arrive.
- Feb-18, 5PM To ship out the *MXR* Competition robot.
- Mar-27/29 Competition at San Jose State University

Benefits

INDUSTRY Benefits

- Advertising spot on robot's body & in other club collateral
- *Community support for educational teen-activities.*

Student Benefits

- Gain knowledge of engineering and computer concepts having fun doing it.
- Practice and learn teamwork skills.
- Fun of competing in math and science projects.

Sponsors

Gold Sponsor — *$5000 and up*

Kleiner Perkins Caufield & Byers (KPCB, renowned VC)
Wells Fargo Bank

Silver Sponsor — *$2500 to $5000*

Bank of America, United Commercial Bank
Integrated Device Technology (IDT)
TSMC (The IC Foundry Leader)

Bronze Sponsors — *Under $2500*

Pfizer Foundation Match Prog., **BayCal, Lions Club, Parents, East-West Bank, Shapell Industries**

In Kind — **Druai Consulting**
PURItech Company, Sushi Lovers
Milpitas High School, NASA Ames Research Center

Club Leaders and Support

Club Officers
Daniel Chang, *President*
Vincent Domincil, *VP*
Edward Lee, *Secretary*
Jacqueline Chan, *Co-Treasurer*
Victor Domincil, *Co-Treasurer*

School Advisors and Support
Steve Cox, *Math Instructor*
Chuck Gary(Chucky G), *Principal*

Parent Partners
Milan Chang, Peter Chang, Virginia Munsayac, Charles Lee, Shu-Ling Lin, Sung Lin

Mentor Team-254
Bellarmine College Prep.HS
Edwin (EJ) Sabathia
Tony Watson, Jay Lundy
Adam Fischbach

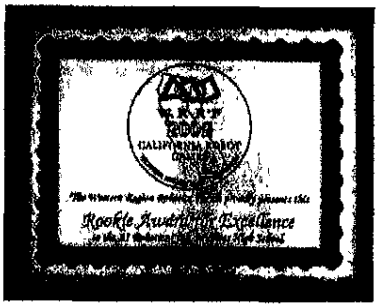
Industry Coaches
Ceal Craig, *Druai Consulting*
Tim Craig, *Druai Consulting*
Gwan Alisantosa, *Sun Microsystems*
Narayan Raju, *Sun Microsystems*
Ann Zeise, *GoMilpitas*
Fred Zeise, *GoQuiet.com*

FIRST Organization Support
Jason Morrella

Achievements

- *Built drive-only type robot Summer 2002, at* NASA-Ames, with mentor support from Bellarmine
- MHS Robot—*Chucky G*—competed at 2002 **Western Region Robotics Forum** California Robot Games and received 2 awards: **"Human Player Champion"** and **"Rookie Award for Excellence"**.

* *Awarded $6,000* **KPCB** *Rookie Grant*



*Qualified for **National** competition, Houston

1 FIRST = For Inspiration and Recognition of Science and Technology. www.usfirst.org
2 Contact : Student Leader, Daniel Chang, changsta86@hotmail.com, tel:408-674-8985
3 For any sponsorship, please make payable to " MILPITAS HIGH SCHOOL, for AI Robotics "

Milpitas Xtreme Robotics

Milpitas High School
Artificial Intelligence
Robotics Club

Agenda

Who We Are

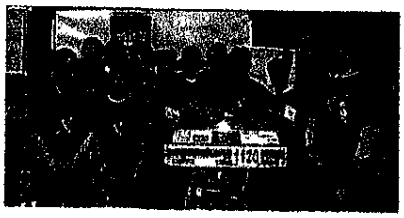
2003 FIRST Competition

Future Goals and Needs

Terry Medina 586 3000

WHO WE ARE

- **Students** at *Milpitas High School* who design & build robots, learning along the way.
- **Parents** who care and support our efforts to learn & grow
- **Faculty & Administrators** at Milpitas High School supporting learning & growing
- **Industry coaches** who want to foster leadership, teamwork and technology learning in our community
- **Businesses & Individuals** who support our quest



WHO WE ARE — MISSION

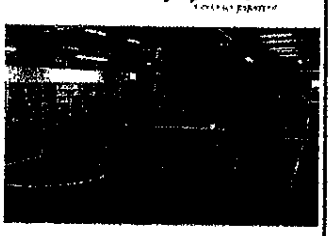
Mission & Objectives

- **Explore robotics** to learn about software development & engineering concepts from a practical, hands-on, experiential point of view.
- **Practice** product **development** and **teamwork**
- **Participate in** 2003 **FIRST** competition at SJSU with *MXR* robot. Complete operational robot. Win a game!
- **Develop** consistent **industry sponsorship support** base this year, positioning club for next year's work.

2003 FIRST Competition

US Wide Competition sponsored by FIRST
- Key Business & Government Partners
  - Fortune 500 companies, NASA
  - Cooperative team effort by students, teachers, communities, corporations, and government
- Nationwide with international participants
  - 20,000 students -- 800 teams -- 24 regional competitions
  - From Canada, Brazil, the U.K., and almost every U.S. state

2003 Timeline
- Began Jan-4. Robot must ship by Feb-18
- Regional Competition: March 27-29
- National Competition: April 10-12
- CalGames: Sept 19-20 (dates tentative)



2003 Stack Attack!!

For Inspiration & Recognition of Science & Technology

2003 FIRST – MXR Design

Chassis
- Began build on Jan-27
- Simple 4-wheel, chain driven, drill motor power

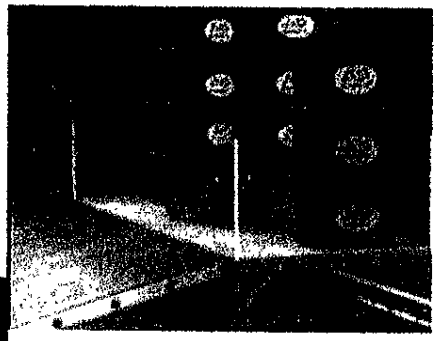
Electrical
- Robot controller, motor controllers, servos, circuit breakers

Software
- PBASIC language
- Needs to be under autonomous control for 15 seconds

Lights! Action! It Runs!
- Feb-03

2003 FIRST – Regional Results

- Built our first robot!
- Won 7 of 9 matches
- Ran in every match



2003 FIRST – National Results

- **Won 2 of 7 National matches**
- **Ran in every match**
- **Sent small team – 3 students**

Future Goals & Needs

We need ongoing support & help!

- Parts
- Registration fees
- Travel to competitions
- NEED:
  - Discounts to purchase parts
  - Donations ($ or material)

Benefits for Sponsors

- *Major Sponsor's logo on robot during competitions*
- Sponsors shown in publications & Web Site
- Community relations support
- Help teens learn about technology, provide growth activities for teens, etc.

Future Goals

Propose robotics as elective class at MHS

- Propose curriculum for 2004-05 school year

Enlarge robotics program to include K-12

- FIRST Lego League - elementary/middle school
- FIRST Robotics - high school & mentor K-8

Engage more parents & supporters

- Create Robotics Booster Club to support MUSD activities in robotics