April 11, 2018 Meeting

The April 11, 2018 Waterloo Technical Society (WTS) meeting was called to order by President Dorhout at 7:25 pm. President Dorhout welcomed visitors and noted that this was the sixth meeting of the 104th year of the Society.

A total of 29 members and guests attended.

Treasurer's Report. Ken Friend reported a beginning balance of $945.17. Income of $20.00 from 2 memberships with expenses of $20.00 for the March speaker's meal leaves a new balance of $945.17. Treasurer Friend's report stated a total of 9 honorary and 53 paid members yielding a membership roster of 62 members.

Current Officers. The 2017-2018 officers for the 104th WTS year:

Officers for the 2017-2018 year (year 104) are:

President:	Gary Dorhout
Co-Vice Presidents:	Jerry Mohling and James Stevenson
Treasurer:	Kenneth Friend & Paul Anderson
Dinner Reservations:	Derek Eagles & Steve Lang
Secretary:	James Stevenson
Publicity/Recognition:	Todd Whiting
Auditing:	Bill Mitchell & Jim Garrett
Nominating Committee:	Open
Web Site:	Tim Schoenfelder / Jim Volgarino

Old Business. President Dorhout reviewed the topics presented in the past year. The dates, speaker and topics for the 104th WTS were:

Speakers for the 2017-2018 Meeting Year (Year 104)

13 Sep 2017 – William Close—Mega Sculptures
11 Oct 2017 – Dr. Bert Schou– Not Your Grandfather's Farm
8 Nov 2017 – Cody Wilkinson – Large Seeding and Tillage Equipment
13 Dec 2017 – No Meeting
10 Jan 2018 – Susan Card—Jerald Sulky Company
14 Feb 2018 – Barbara and Dale Hatinger – A Career in Technology
14 Mar 2018—Jim Volgarino—The Story of William Galloway
11 Apr 2018—Waverly Shell Rock Wave Droids Robotics Team

New Business. No new business was discussed.

Guest Speaker. The Wave Droids "FIRST" Tech Challenge team consisting of students from Waverly-Shell Rock will bring their Robot and give a PowerPoint presentation about its technical aspects. They recently returned from Super Regionals.

Students/Speakers

- Caleb Hunt (freshman)
- Sam Potter (junior)
- Amon McAllister (junior)
- Adam Everhardt (sophomore)
- Caden Otis (freshman)
- Alex Haaland (junior)
- Spencer Lockey (sophomore)

Coaches are Eric Haaland and Leslie Potter. Mentors are Ryan Otis, John Potter, Deb Sand, and Mark Sand.

The presentation is appended to the end of these notes.

Next Meeting. The next meeting will be May 9, 2018, featured will be KWWL Studio Renovation tour.

Meeting adjourned at 8:40 pm.

Respectfully submitted,

James R. Stevenson, Vice President and Secretary

W-SR Wave Droids

#13206



Team



- 13 members
  - 12 male, 1 female
  - Freshmen, sophomores, juniors
- 5 coaches and mentors
  - Coaches: mechanical engineer/manager at John Deere; industrial and manufacturing systems engineering senior lecturer at Iowa State
  - Mentors: 2 computer engineers at John Deere; State of Iowa Department of Public Safety officer; W-SR teachers

Timeline



- October 2016 – began conversations to establish team
- April 2017 – school board's blessing
- Summer of 2017 – recruited team members, coaches/mentors, teacher sponsor, space
- September 2017 – team formed, fundraising began
- December 2017 – competing, community outreach
- January 2018 – first "for real" competition
- February 2018 – made it to STATE
- March 2018 – made it to Super Regionals

Relic Recovery - Robot Scoring

- Autonomous mode
  - Jewel
  - Glyphs
  - Parking
- Driver controlled mode
  - Glyphs
  - Relic
  - Balancing



Robot Mechanical Design

- Base
- Wheels
- Jewel Arm
- Glyph Arm
- Relic Arm



Robot Programming

- This year – BLOCKS
- Next year – JAVA
- Multiple routines
  - Autonomous
    - Jewel
    - Glyph
    - Parking
  - Driver Controlled



Competition

- 5 league meets to qualify and establish seeding
- League championship in January
- Super Qualifier, State in February
- Super Regional in March

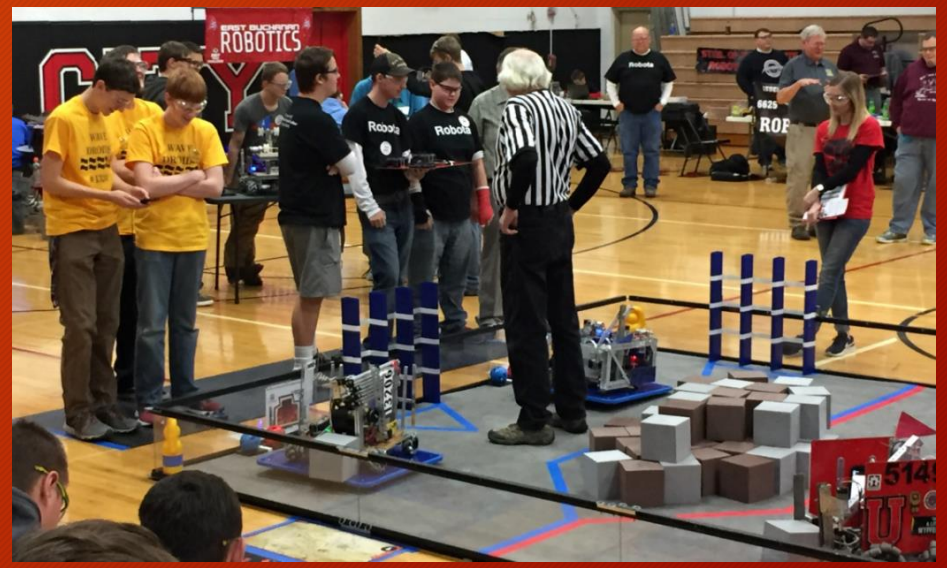






Meets

- “Collaborative Cooperation” → “Coopertition”
- Gracious professionalism
- Alliances / team partnerships
- Scouting
- Assisting each other



Other Evaluations

- Business Plan
- Outreach
- Mechanical Design
- Programming Design





Outreach





- W-SR Lego League teams – mentored Sep-Dec
- Tri-Rivers Trendsetters 4H Club (~75 people)
- Exchange Club (~50 people)
- Carey STEM camp for 2nd graders (13 students)
- Waverly Rotary
- Robotics Showcase (~50 people)
- Bremer County 4-H workshop (8 members)
- W-SR Middle School 7th & 8th graders (~300 students)
- Video for W-SR elementary school
- Visit to ISU to tour labs and meet faculty
- Team Neutrino and Swart Dogs FRC teams

Fundraising

- Startup costs: estimated $6000 to be able to compete at all
- Goal: $10,000

- Met goal: raised a little over $10K
- Spent money on
  - Robot parts
  - Tools and supplies
  - Field
  - Shirts
  - Entry fees



Fundraising

- Field and missions change every year
- Will need to raise ~$6K/team/year to compete
- Hoping to have 2 teams next year!



Thank you!

- Contact info: Sam Potter, spotter19@wsr.k12.ia.us

- *https://wavedroid13206.wixsite.com/wavedroids-ftc*



