

# ZACHARY PAUL RUKSTELA

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## EXPERIENCE

**Owner/Chief Engineer**, *Rukstela Heavy Industries, LLC.*, Oakland, CA. (2005-present)

- ♦ Steam engine restoration and arts production company.
- ♦ Notable project/client: *Paul Bonderson* (co-founder of Brocade Communications Systems, Inc.), engineering project management for historical restoration of 12-ton 1917 Traction Engine. Reporting directly to Mr. Bonderson on progress and systems restoration.
- ♦ Budgets, planning timeline/dependencies, research and staff.
- ♦ Interface with Cal OSHA officials on certifications and State of California code requirements.
- ♦ Research, engineering, sourcing, and manufacturing of replacement parts.

**Director/Chief Engineer**, *Kinetic Steam Works*, Oakland, CA. (2005-present)

- ♦ Founder of the Oakland based industrial arts group, whose mission is: "Steam power, kinetic art, industrial art & education creatively connected."
- ♦ Manage all aspects of proposed projects, events, and management of volunteers. Using collaboration across various artistic mediums to create unprecedented installations and events.
- ♦ Creative fund raising, promoting interest in engineering history, and offering assistance to anyone with a passion for steam/motive power and art.

**Director of Engineering**, *Clear Channel Radio*, Sacramento, San Luis Obispo, Chico, CA. (2002-2008)

- ♦ Engineering Department: hired to create it from scratch. Brought all radio stations into FCC compliance. Consolidated eight radio stations into two studio locations. Integrated automation systems (hardware & software) with the technical infrastructure to run the stations at full potential, which eliminated redundancy and maximized Traffic Dept. efficiency.
- ♦ Automated: emergency alert systems, station operations logs, and syndicated programming to remove the need for a real-time supervision. Developed a comprehensive, efficient preventative maintenance plan to preserve the safety and reliability of nine transmitter sites.
- ♦ Replaced & Updated: audio processing components, implemented backup systems in the event of equipment failure, upgraded professional editing software. Replaced inefficient vacuum tube transmitters with digital transmitters and advanced the unique technological needs of each station. These accomplishments allowed these stations to meet their goals as market leaders.
- ♦ Personnel Management: hired, trained, and managed personnel. Created in-house, specialized training programs, advancing personnel to the level of RF technicians at a fraction of a more experienced employee's cost, without compromising quality or safety.

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**Consulting Engineer**, *Cal Poly Radio, California Polytechnic State University, San Luis Obispo, CA.* (2003-2007)

- ♦ Designed a state-of-the-art broadcast facility for KCPR & the Cal Poly Department of Journalism, helping them to regain their State accreditation and meet the needs of their students.
- ♦ Authored and executed a proposal doubling the Cal Poly radio broadcast coverage on the Central Coast.
- ♦ Advised a team of over one hundred students on how to refine the quality of their audio content and ensure the integrity of their radio production.
- ♦ Trained engineering students using hands-on RF technology and studio maintenance lessons.

**Staff Engineer**, *Susquehanna Radio, San Francisco, CA.* (1998-2001)

*KFOG, KNBR, KSAN, KTCT, KFFG*

- ♦ Co-designed SBC Park broadcast facility for KNBR.
- ♦ Setup two studios: one play-by-play booth and one interview studio, both with digital consoles, hard-line connections to the main studio, the ability to take phone calls and operate as a back-up studio to the main KNBR studios.
- ♦ Designed and setup broadcast equipment for all facets of major market sports events for the San Francisco Giants and the Oakland Raiders, including sideline interviews and effects, locker room reporting and onsite editing and production.
- ♦ Installed two FM transmitters, two high-powered AM transmitters and one FM booster; maintained one high-power AM directional antenna system, AM and FM transmitters, and digital automation systems that provided maximum RF coverage to the unique topography of the hilly Bay Area.
- ♦ Operated ENCO Automation Systems creating a seamless broadcast between KFOG's North Bay and South Bay frequency. Setup and operated remote broadcasts using ISDN and RPU equipment.

### EDUCATION & TRAINING

- ♦ *University of Nevada Reno, Reno, NV.* Electrical Engineering, 1994-98.
- ♦ *Harris Broadcasting Company.* RF 101, 1996.
- ♦ *Harris Broadcasting Company.* DX-50kw Training Course, 1999.

### ADDITIONAL SKILLS

- ♦ CPR & First Aid Training.
- ♦ Merchant Marine: Coast Guard Certified, Society of Broadcast Engineers Member, 1995.