

# PSU ECE Capstone Team Contract

## Contact Information

### Team Members

Team Member Name	Phone	Email
Nathaniel Fraly*	541-971-6436	<a href="mailto:nfraly@pdx.edu">nfraly@pdx.edu</a>
Riley Cox	503-716-2992	<a href="mailto:rilco@pdx.edu">rilco@pdx.edu</a>
Mohammad Alshaiji	541-740-0106	<a href="mailto:alshaiji@pdx.edu">alshaiji@pdx.edu</a>
Xiang Li	971-563-8894	<a href="mailto:shane29@pdx.edu">shane29@pdx.edu</a>
Haoyang Han	971-255-3334	<a href="mailto:haoyang@pdx.edu">haoyang@pdx.edu</a>

### Industry sponsor

Organization and Name	Phone	Email
Rahul Koche - Lattice		<a href="mailto:RahulKumar.Koche@latticesemi.com">RahulKumar.Koche@latticesemi.com</a>

### Faculty Advisor

Name	Phone	Email
Roy Kravitz	503-725-9046	<a href="mailto:Roy.kravitz@pdx.edu">Roy.kravitz@pdx.edu</a>

## Project Objective

The team aims to gain a better understanding of FPGA toolchains and more experience in synthesis, including considerations that are taken into account when developing a project within industry. Additionally, we plan to explore further the types of processing we can accomplish in displaying videos. We want to increase our skills in marketing the applicability of our project.

# Member Skills, Strengths, and Areas of Practice

Teammate Name	Key areas of strength to leverage in the project	Key areas of practice and development in the project
Nathaniel Fraly	(System)Verilog, leadership, adaptability	Synthesis, layout, design methodology
Riley Cox	(System)Verilog, flexibility, research	Synthesis, design
Hao Yang Han	Low power reqs, physical layout, soldering	Synthesis, (System)Verilog
Mohammad Alshaiji	Documentation, Verilog, debug, soldering, research	Synthesis, SystemVerilog, design
Xiang Li	(System)Verilog, debug	Synthesis, documentation

## Meetings

### Team Meetings

- Frequency: Twice weekly, more as needed
- Proposed days and times: Monday 1000-1200 virtual, Friday 1400-1600 in person (earlier on capstone meeting days)
- Platform: Discord on Mondays, at EB on non-capstone days, UP on capstone days
- Expectations: Show up within 5 min of meeting time (**Please don't be late without warning**)
- Agenda: Discuss due-out progress, next set of due-outs, research findings, obstacles, interpersonal issues (bring it up here before going to Andrew, lowest level first)
- Prep: Have code ready, be prepared to explain obstacles and a few possible solutions, if possible, design methodology breakdowns, etc. In addition, be ready to discuss next steps, what you need, etc.
- Attendance: If you miss two meetings without warning, we go to Andrew.
- Participation: Present your work as appropriate. If on a sub-team, have a plan to ensure all members present something in any given meeting. If your only contribution is "Things are going smoothly", or "The rest of the team did that, I'm not sure what's happening", you need to actively attempt to grab more work or do documentation.
- Note-taking (minutes): Mohammad

- Other expectations: Don't work hog, don't work steal, contribute positively (if you don't like a design idea and don't have an alternative, nobody cares). Allow members to speak safely and openly, do not belittle or berate a team member under any circumstances. Safe workplace policies will apply and will be enforced.

## Team meeting with Industry Sponsor (Faculty Advisor invited)

- Frequency: N/A until able to meet with Rahul
- Proposed days and times: See above
- Platform: See above
- Expectations: See above

## Team meeting with Faculty Advisor

- Frequency: Two (2) days before industry sponsor meeting, minimum weekly
- Proposed days and times:
- Platform: Zoom/in-person, depending on other activities and availability
- Expectations: Gather thoughts and ideas to present to Rahul. Report progress, ideas, and new breakthroughs. Get feedback on implementation and source code structure to ensure we aren't designing ourselves into a corner.

# Communications

## Preferred Method of Communication

- Intra-team communication: Discord
- To Roy, Rahul, or both: Email (searchable history, easier to outline thoughts clearly and succinctly)

## Information Architecture

- **GitHub** will be used for source code, documentation, version control, revision history, TODO, and project management documentation.

# Team Working Agreements and Expectations

## Guiding principles of how we work together

Must ensure that everyone has a chance to write source code or do tool chain development. We all want to write all the code, so everyone will get to write some. Source code changes must be IAW (in accordance with) best practices outlined by Lattice, or by our team if Lattice has no direction. Documentation will be done by Xiang, with assistance from Mohammad. Ideas that impact the implementation work done by others will be discussed by the team, with final say going to team lead. Everyone should voice concerns as soon as they arise, ideally with the parties involved before going to the team lead or Andrew.

## How we make decisions

Decisions will be made by consulting the impacted parties, with team-wide decisions being made as a group with the final decision going to team lead. There will be no unjustified “What I say goes” from the team lead, and the team reserved the right to overrule the team lead unanimously. For decisions that impact parties not involving the team lead, the team lead will only get involved if a resolution can’t be reached. If the team feels that the team lead is inappropriately making decisions, Andrew will be consulted and the team lead will be demoted, and the rest of the decisions will be made by simple vote.

## Approach to conflict

If an issue arises, the issue will be addressed promptly during the next meeting. If said issue cannot be resolved via a team meeting, then a meeting with Andrew will be the next step.

## Project Standards

The project should at least meet the expectations that are set by our industry sponsor, Rahul. Ensure professional language in all work and documentation. GitHub should be kept neat and organized. Each commit should contain only one change, minus the initial commit. All commits to main should be committed via pull request. All members will work on their own separate branches.

## How we will hold each other accountable

If an issue comes up, a discussion will be held during the team meeting to discuss any issues. If it is unable to be resolved by the team members, then it should be taken directly to Andrew.

## Team Contract Signatures

Team Member Name
Riley Cox
Nathan Fraly
Mohammad Alshaiji
Xiang Li
Haoyang Han