

Making holograms – an educational CD-ROM

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Abstract: The Columbia Career Center High School SPIE Chapter has created an educational CD-ROM to teach holography to students on the threshold of a career path in Optics and Photonics. Holography is a National Photonics Skill Standard for Technicians and is an excellent educational tool. As of yet, the market lacks a product of this kind.

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Summary

The Columbia Career Center's three-year high school photonics program has an SPIE student Chapter. For the last three years the chapter has focused on the production of an educational CD-ROM on "How to Make Holograms." Holography is a National Photonics Skill Standard for Technicians and provides the foundation for all three courses within the Career Center's photonics program. Holography is an outstanding motivational tool for students and can also be used to educate, parents, school administrators, School Board members and politicians about the need to support optics education.

This first paper outlines the goals of the CD-ROM project as an educational tool from the instructor's perspective, and then - from the students' perspective - discusses the trials and tribulations of creating an educational tool for peers.

The instructor's goals for the project included: enhancing students' understanding of practical holography, supplying students with new educational material written by and for students, improving students' written and verbal communication skills, endorsing student SPIE membership, and promoting the work of the Career Center in secondary level optics and photonics education. From the students' perspective the project resulted in numerous challenges. These included organizational problems, practical challenges, teamwork problems, time-management, motivational issues, and reliability of individual members.

References

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