



PHOSYS:


Web based learning tool

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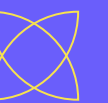
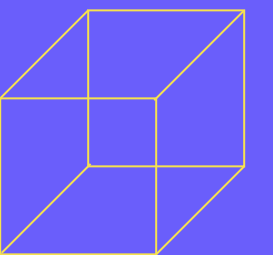
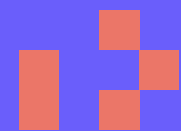


Relevance

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- Specialists in STEM subjects are severely lacking in the world
 - 75% of US students show interest in studying STEM but are deterred by unintuitive math that isn't visualized



Out of all STEM subjects our product specializes in physics





Problem

- Physics is a hard subject, that is hard to visualise without expensive equipment
- Electromagnetism is one of the most difficult topics and one that even the brightest students struggle with





Problem

- There are tools for engineers (Ansys suite, Dassault SIMULIA) that are expensive and take years to learn
- There is learning material (PhET, Falstad, CemSim) that is minimally interactive and limits creativity
- Easy to use and limitless solutions are missing





Our product

- A web app that allows you to make time varying electromagnetic field simulations
- Graphic icons for all actions
- Visual results



Prototype

Available at:
phosys.pages.dev

The screenshot displays the PHOSYS web application interface. The browser address bar shows the URL `phosys.lv`. The application features a top navigation bar with the PHOSYS logo, a file explorer icon, a square icon, a lightbulb icon, a pencil icon, and a green **LAUNCH** button. On the left, a **Properties** panel is visible, containing the following settings:

- Point source light
X 111 Y 195
- Wavelength, nm: 1500
- Amplitude: 10
- Phase shift, degrees: 0

The main workspace is divided into two views. The left view shows a blue point source and a red rectangular slit. The right view, labeled **Main view**, shows the resulting diffraction pattern of concentric circles. A **Sources** panel is visible in the top right of the workspace. At the bottom, a timeline slider is set to 200, and the frame rate is indicated as **FPS 30**. The Windows taskbar at the bottom shows the search bar, system tray, and the date/time `7:33 PM 5/16/2024`.





Market

- In 2024 the ministry of education in Latvia raised funding towards STEM education by 30% (7 million EUR) and plans to continue this initiative in the coming years
- Jelgava Technology High school (a STEM focused school) recently spent 22 million on improving the quality of education
- In the United states the market for K-12 STEM education was valued at 37.84 billion USD





Business model

- We license our software to schools and governments that care about giving a good education to their students
- The software is web-based so it will be easy to integrate in curriculums, similar to the web based graphing calculator Desmos
- The brunt part of calculations are done on our servers making the solutions very scalable
- The software is offered as a service (rented) allowing us to keep maintaining it

