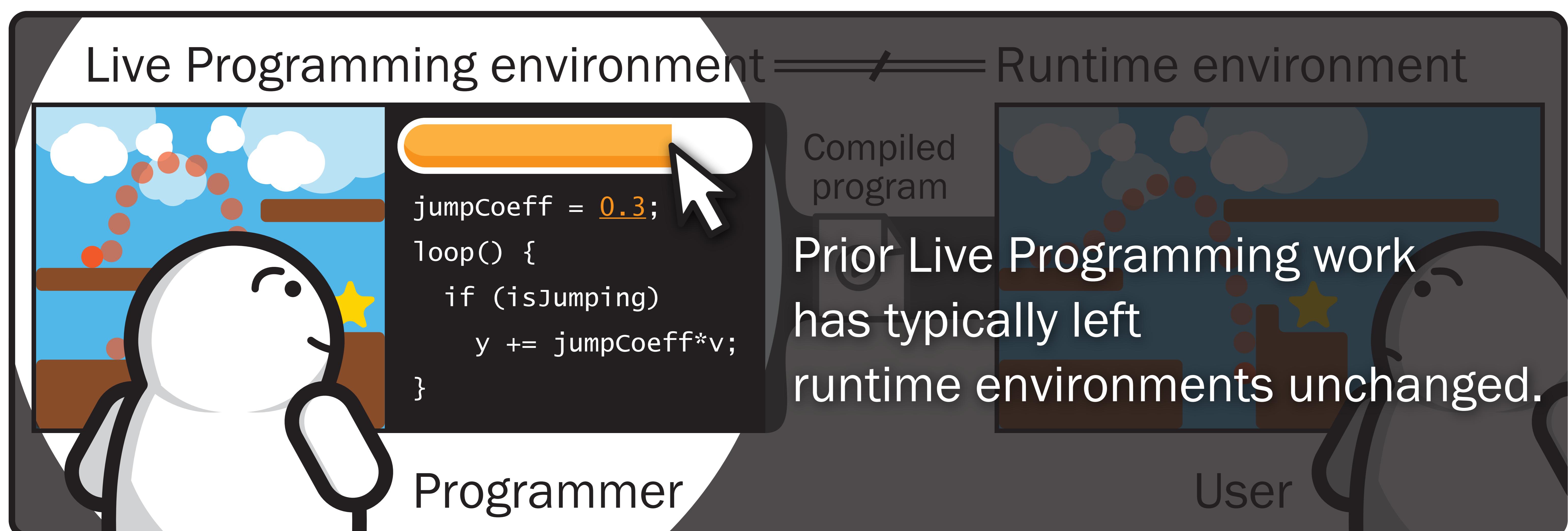
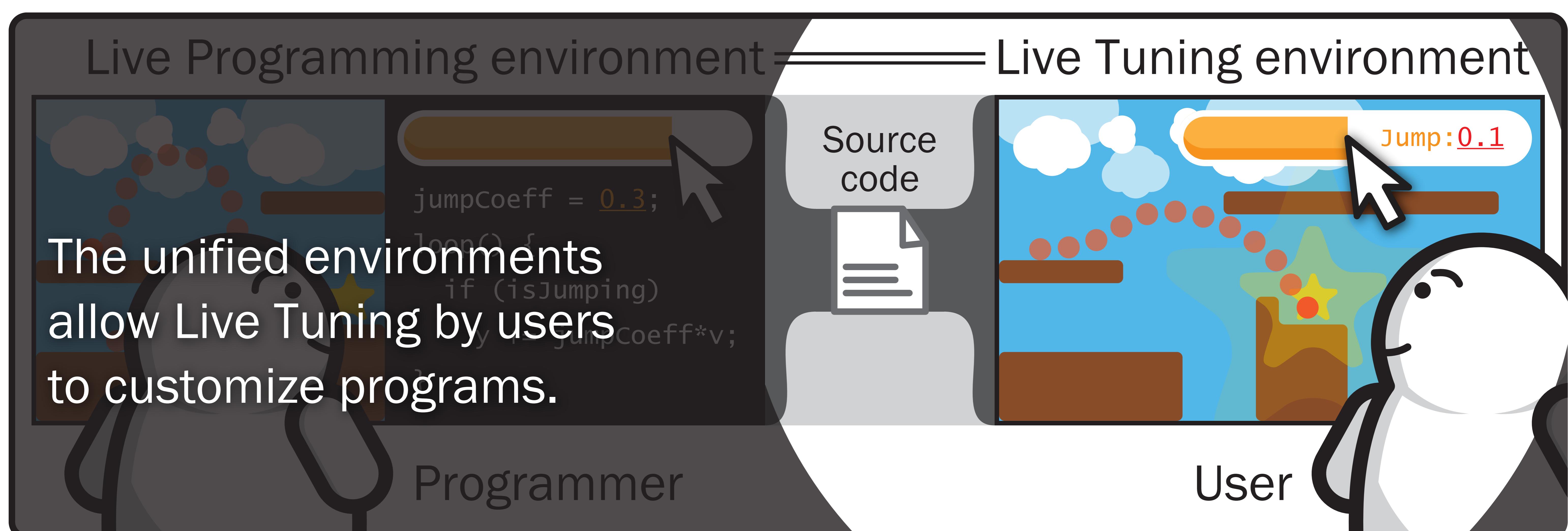


# Live Tuning: Expanding Live Programming Benefits to Non-Programmers



## Prior work on Live Programming (LP) systems

- Programmers are responsible for the entire program including its logic and parameters
- End-users (program users) usually cannot access the source code nor edit it
- Parameter tuning interfaces are intuitive enough for the users - **why not liberate them?**



## Live Tuning: yet another layer of user interface in LP systems

- Programmers can **gain help from users** to explore appropriate parameter values
- End-users can customize the program **extensively yet without worries** of breaking it

Example IDEs that support Live Tuning typically web-based due to its collaborative nature

The screenshot shows two web-based IDEs. The left one, 'Textalive', has sections for 'for programmers' (showing code editor and preview) and 'for users' (showing parameter sliders and preview). The right one, 'f3.js', also has similar sections. Both interfaces show how users can interact with the code and preview results simultaneously.

IDE for video authoring: <http://textalive.jp>

IDE for Internet of Things: <http://f3js.org>