

To: Manager's Manager

From: Manager

Subject: Programming language for super-hot project

We have decided to use Javascript for this project. Our Javascript project will run smoothly on Linux in the Node.js environment, which is already installed on the CCIS Linux VDIs, as well as on the college's physical machines.

Node supports Unix-style standard-in and standard-out I/O operations, and for TCP/IP sockets. Javascript also has native functionality equipped to produce, parse, and manipulate JSON. These features will enable us to test, run, and connect distributed project components in a language-agnostic manner.

Javascript allows for the separation of code into folders and modules to give the project codebase a logical structure, enabling us to build robust, dependency-free components that can be reused and tested separately. This will allow us to quickly prototype components in isolation. It can also load code dynamically, so programs will be able to detect when libraries or modules did not load successfully. Our project will be designed to handle such failures gracefully.

The Node package manager provides many free, open-source libraries for developing unit tests and a GUI. Some mature unit testing libraries include Jasmine, Mocha, and Chai. To develop our GUI, we will use standard Web technologies together with the Electron framework for desktop applications.

For an IDE, we will use the Atom text editor and associated add-ons. There are plugins for Javascript syntax highlighting, debugging, and function/keyword autocomplete, as well as native Git integration.

Altogether, Javascript's features make it flexible enough to satisfy the project requirements and work with distributed systems.