

The Virtual Office Door

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The Big Picture

Historically office doors served as a form of communication among co-workers and educators. Many different people need access to this information. Gaining this information typically involves physically visiting the owner's door or cubicle. This can be troublesome because people need to make good use of their time, and unnecessarily visiting a door wastes time.

The cause of this problem are the two types of communication. Direct and indirect forms of communication.

Direct communication:

- Messages are sent directly to a recipient (person to person interaction)
- Multiple modern day implementations such as: Facebook, Gmail, Twitter, and SMS messaging

Indirect communication:

- Messages are displayed on a physical medium such as: office doors, cubicle walls, bulletin boards
- Can be time sensitive communications (Problem!)
- No modern day technologies currently serve as a means to convey indirect communications (Problem!)

What is the issue?

The major issue that universities and teachers currently face lies within the world of indirect communications. Not everyone is going to send out an email to all of their employees letting them know when they will be away for 15 minutes! This causes a huge communication issue in the workplace where someone will waste valuable time attempting to locate a coworker!

How does this affect NAU?

At NAU, CS Department professors teach classes at the Engineering Building on south campus while their offices are located in the SICCS building on north campus. If a student spends their time walking to a professor's office to get help and the professor is out for a meeting or something similar, there is no quick and easy way to notify students they are no longer available. Effectively there is no way for the students to know their professor is unavailable until arriving to their office and seeing the sticky note on their door saying: "Office hours canceled for today." This not only wastes the student's time but it also detracts from their learning initiative and makes it more difficult to acquire assistance from their professor!

Welcome to your Virtual Office Door

The screenshot shows a web interface for 'Dr. Professor's Office Door'. It features a dark navigation bar with 'Home', 'Profile', 'Your Door', 'Door Options', and 'About' menus, and a 'Log out' button. The main content area has a green wood-grain background. Several widgets are visible: a 'Back in 15 minutes!' notification, an email subscription form with 'Subscribe' and 'Unsubscribe' buttons, a calendar widget for 'Thursday April 20 2017' listing 'Quiz 4 due on BBLearn' and 'Project 2 Due', and a sticky note titled 'API GUIDE' with technical details. Callout boxes point to various features: 'A customizable title for your door!' (pointing to the door title), 'Streamlined bootstrap design for easy navigation and content viewing!' (pointing to the navigation bar), 'Sticky note for quick and easy communication!' (pointing to the API guide), 'Integration with Google's Login API for secure and reliable account management' (pointing to the 'Log out' button), 'Allow guests to receive notifications if an update is made to widget content!' (pointing to the email subscription form), 'Liven up your door with a picture of your choosing!' (pointing to the wood-grain background), and 'Add events from your personal calendar, or add assignments in an easy to read view!' (pointing to the calendar widget).

Our Solution

We envision a secure, fast and reliable web application that allows for easy communication between students and teachers. The Virtual Office Door would essentially provide the functionality of a physical office door in a virtual space. With this we would effectively eliminate the need for professors to post forms of indirect communication on their office doors, which would in turn eliminate a myriad of issues that arise from reliance on a physical office space. Our solution would also boast also being available not only on a desktop, but also viewable in a mobile environment.

Some of the key features of our solution are:

- Customizable and moveable widgets
- Personalized Office Doors with custom backgrounds
- Secure and reliable login system
- Mobile friendly viewing

Technologies

Frontend:

- HTML5/CSS3
- Javascript/Jquery
- Webix
- Gridstack
- Bootstrap
- Google+ API



Backend:

- Python/Django
- Django REST framework
- SQLite
- Amazon Web Services
- Google Gmail Services



Future of the Office Door

The future of the Virtual Office Door is overflowing with possibility as we are only laying the ground work for improvements to come, such as:

Duplicate Widgets

Add support for more than one copy of each widget.

Multiple doors for one account:

Allow a single account to manage multiple doors for multiple purposes.

Multiple login support:

Add login support for other account API's such as Facebook or Twitter.

Automatic email notifications:

Allow viewers to tailor email notifications based on specific door/widget updates.

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