SkidScreen

Let's Digitalize one of the most waste-generating sectors of Skidmore: Event Posters.

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SkidScreen proposes a transformative shift from traditional paper-based event posters to an innovative digital display system. Recognizing the environmental impact and inefficiencies of excessive paper waste, coupled with the limited visibility and engagement of current event posters, this initiative seeks to introduce a digitally interactive panel. This panel will seamlessly integrate with SkidSync to fetch real-time event details, offering a dynamic, eco-friendly, and cost-effective solution to event publicity. Anticipated benefits include substantial annual cost savings, enhanced event visibility, and alignment with Skidmore's eco-friendly initiatives. With features like push notifications, QR code scanning, and school map integration, the panel not only promises to revitalize the way events are promoted but also paves the way for significantly reducing paper posters (wherever not needed.).

Idea:
The initiation of a digitally interactive events display panel project aimed at efficiently showcasing ongoing and upcoming events. **Aim: To develop a prototype to develop a proof of concept.**

Motivation:
The issue at hand is very simple, people aren't showing up to events and we are just printing excessive amounts of posters that no one reads. The walls are full of them and it is so distracting that I rather avoid it. And many posters just lie around months after the date of the event. And just the mere magnitude of paper wasted on printing these posters when compared to their actual impact on getting people to events is minuscule. Having had an e-board position in three clubs for 3 semesters, I can attest to this. Also, everyone makes a digital poster for the clubs anyways, so why not just use that? Skidscreen would allow us to do that.

The objective of the current project:
The objective of SkidScreen is to transition from traditional paper event posters to a digital display panels. By connecting with SkidSync through an API, the panel provides real-time event updates, aiming to reduce paper usage and improve event visibility. In addition to basic event information, the system offers functionalities like push notifications, QR code scans for event details, and integration with school maps to help users locate event venues. SkidScreen represents a step toward a more sustainable and organized approach to event promotion.

Technical Todo:

- Design and construct the display panel frame in the school's idea lab.
- Procure CPU Components:
    - Identify components that support the desired display resolution.
    - Ensure the CPU includes WiFi capabilities for real-time data access.
- Develop API for SkidSync Data:
    - Establish a secure connection with SkidSync's available endpoints.
    - Design the API to fetch the latest event data efficiently.
- Design Dynamic UI for Events:
    - Layout the display of events, associated building images, and key details.
    - Ensure the UI is intuitive and user-friendly.

Figure 2: One of many Skidmore poster locations, hard to read and very overwhelming.

Figure 3: Vision of SkidScreens, (Image not to Size, they will be smaller than this. AI image!)

Benefits:

- **Estimated Savings:**
    - Considering the average print cost of $0.25 for each poster, and taking into account the prolific activity of over 160 clubs along with various departments that print between 10 to 20 posters monthly, the potential for savings is significant. If our initiative can deter the printing of just 5 to 10 posters per entity, we're looking at an estimated monthly savings of approximately $400. Over the span of a year, this can culminate in a substantial saving of around $4,800.
- **Enhanced Visibility:**
    - One of the standout features of a digital display is its ability to remain illuminated, ensuring visibility even during nighttime. This continuous visibility ensures that information reaches a wider audience, irrespective of the time of day.
- **Eco-friendly Approach:**
    - By transitioning to a digital display, we can significantly cut down on paper waste. This initiative not only benefits the school financially but also aligns seamlessly with broader eco-friendly and sustainability goals.
- **Foundation for Future Expansion:**
    - The introduction of this digital display serves as a stepping stone for future technological advancements. Given its potential success, there's an opportunity to replicate this model and deploy similar digital displays across various locations on campus.
- **Central Control:**
    - A centralized system offers the advantage of instantaneous updates. Events, announcements, or any displayed information can be modified on the go, ensuring that the content remains current and relevant.
- **Improved Event Direction:**
    - Unlike traditional posters, which often miss out on detailed location information, the digital display can guide individuals to ongoing events by providing precise location details. This feature enhances the user experience and ensures higher event attendance.
- **Aesthetic Appeal: (It will look really cool!)**
    - Beyond its functionality, the digital display adds a modern touch to the campus environment. Its sleek design and dynamic interface are sure to catch eye and make a statement.
- **Innovation at Skidmore:**
    - Embracing this digital transition underlines Skidmore's commitment to innovation. It's not just about adopting new technologies, but about pioneering change and setting a benchmark for educational institutions everywhere.

Stakeholders:

1. School administration
2. Club representatives
3. Academic departments
4. Students

Budget:

Item Description	Estimated Cost
Frame construction at Idea Lab	$0
CPU with WiFi	$150
Panel and other components	$250
Software development (self-coded)	$0
Cables, cords, adapters, and miscellaneous components	$100
Miscellaneous (10% of the total without initial misc.)	$50
Total Estimated Cost	**$550**

Resources:

- Idea lab facilities
- SkidSync database access
- Hardware procurement channels
- Software development tools

Risks and Challenges:

1. **Software-Hardware Integration:**
    - Integrating software with hardware is intricate. Ensuring compatibility and smooth operation between the two is vital to prevent system glitches or failures.
2. **Real-time Accuracy of Events:**
    - Displaying up-to-date events requires a seamless data flow from Skidsync. However, there are uncertainties about Skidsync's real-time data provision, which could be a hurdle.
3. **Display Panel Durability:**
    - The panel needs to withstand daily wear, potential weather elements, and other external factors. Ensuring its robustness is key to the project's success.
4. **Electrical Connectivity and Vandalism Protection:**
    - A reliable electrical connection is crucial for continuous operation. Given its public placement, protective measures against potential vandalism, similar to those for vending machines or public computers, need consideration.

Success Criteria:

1. **Real-time Data Acquisition:**
    - A primary marker of success will be our ability to seamlessly fetch and display real-time data from Skid-sync. This ensures that the audience views the most current and relevant event information.
2. **Reduction in Printed Material:**

    - One of the tangible indicators of success would be observing a noticeable decline in the number of printed posters. This not only aligns with eco-friendly initiatives but also indicates a shift towards digital reliance.
3. **Boost in Event Attendance:**
    - A rise in the number of attendees at events would signify the effectiveness of the digital display. This means the display is serving its purpose of informing and attracting a larger audience.
4. **Stakeholder Satisfaction:**
    - Positive feedback and endorsement from key stakeholders, including students, faculty, and administration, will be pivotal. Their satisfaction indicates that the project meets or exceeds expectations.
5. **Cost-Efficiency:**
    - While innovation is essential, it's equally important that the project remains budget-friendly. Achieving the desired results without excessive expenditure will be a critical success factor.

Additional Features: (Things I want to work on)

- Push notifications to mobile devices when a user is near the display, highlighting ongoing events. Therefore, a mobile app for this events system.
- A QR code scanner for immediate event registration or additional details.
- Integration with school maps to guide users to event locations.
- Periodic event highlights with dynamic animations to grab attention.

Personal Learning Outcome:

This project offers a hands-on learning experience in software hardware integration. It provides an opportunity to delve deeper into the intricacies of integrating digital software solutions with physical hardware components, thus enhancing understanding and skills in these areas. Furthermore, the project's success and impact on the community will foster a sense of achievement and contribution.