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6th International Innovation & Design in Library & Information Science Competition (InDeLib2023)



MAPPING THE LIBRARY OF TOMORROW THROUGH INNOVATION

Editors

Asmadi Mohammed Ghazali
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Zuraidah Arif
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Dewan Perdana,
UiTM Kedah

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PREFACE

The first International Innovation & Design in Library & Information Science Competition (InDeLib) was held in 2016 at the international level. InDeLiB became a brand name linked to the Faculty of Information Management, UiTM Kedah Branch, known to many local and international learning institutions. InDeLib is open to all organizations (libraries), librarians, professionals, researchers, academicians, teachers, and students from institutes of higher learning, college, secondary and primary schools. They share their ideas or methods throughout innovation and invention, particularly in library and information science. The 6th InDeLib 2023 is endorsed by the Librarians Association of Malaysia and the National Library of Malaysia.

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3D LIBRARY RESOURCES: A POWERFUL TOOL IN ENHANCING EDUCATIONAL RESOURCES AND STUDENT ACCESSIBILITY

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Abstract

The AMDI Library at the Universiti Sains Malaysia (USM) has initiated the transformative steps to introduce 3D library resources. Previously, users searched for information via the Koha library management system, which provided a bibliographic description of items. This library access was limited to physical resources such as books, graphics, anatomical models, videos, etc. Online 3D resources can be accessed from anywhere with an internet connection, making them highly accessible. Furthermore, online 3D resources can provide an engaging and immersive experience by interacting with virtual objects to enhance their learning and understanding. To materialize this, a 3D web portal called GoVR was created and integrated with Koha, providing a more comprehensive and immersive viewing experience and enhancing Koha's functionality. The homegrown web-based system called "VR Discovery" is a 3D data management system that automatically transforms library resources into 3D format. These 3D resources are then transmitted and displayed on the GoVR web portal, designed responsively for different types of devices library users use. The development of VR Discovery considered information management, processing, analysis, and data production into 3D forms. The system has important characteristics such as search capabilities, security, and data homogeneity, with a specialized metadata template provided for each item of information. The VR Discovery system has made it easier for administrators to maintain library information resource records. The project initiatives have received valuable feedback from library users. This project is an innovative and creative 3D online learning platform for USM staff and students to access library information resources. It has a tremendous potential to be adapted by other academic libraries to enhance teaching and learning experiences to benefit both traditional and non-traditional learners.

Keywords

3D library resources, GoVR, VR Discovery, immersive education experience

Novelty & Uniqueness

Novelty – Digital library contents that are searchable and accessible over the Web offer immersive experiences to enrich learning, engagement, and resource accessibility. Additionally, they seamlessly integrate with library automation systems to promote utilising information resources.

Uniqueness

1. Accessibility
 - With these technologies, libraries can now accommodate individuals who cannot personally visit their physical premises, making accessing library resources more convenient than ever before.
2. Engagement
 - By offering interactive and immersive experiences, a library can engage and inspire users in a way that traditional books cannot. This situation holds significant advantages for the younger generation, who are familiar with dynamic digital media experiences.
3. Education
 - Enhance learning engagement by enabling individuals to visualize the 3D format of subjects they study.

- Engage with these 3D objects by modifying their shape, colour, and size, or providing a 360-degree view.
 - Facilitate students' understanding and learning of concepts using interactive 3D objects and views.
4. Preservation
- Libraries can safeguard valuable and rare materials for future generations' enjoyment. These technologies enable the digitization and preservation of fragile resources, enhancing public accessibility.
 - Offering remarkable precision in exploring artefacts, eliminating the risk of harm to the originals.
 - Users can easily view the 3D model without requiring physical interaction, and library visitors can skip waiting in queues to view the items.

Potential Commercialization

The project at the AMDI Library, Universiti Sains Malaysia (USM), focusing on introducing 3D library resources through the VR Discovery system and the GoVR web portal, presents significant potential for commercialization and wider adoption in the academic and educational sectors. Here is a breakdown of the potential commercialization aspects:

1. **Licensing and Subscription Model:** The VR Discovery system and GoVR web portal can be commercialized through a licensing or subscription model. Other academic institutions and libraries could subscribe to the platform to provide their students and staff with 3D library resources. The licensing could be based on the institution's size, the number of users, or other factors.
2. **White-Label Solutions:** The technology behind VR Discovery and GoVR could be packaged as a white-label solution. Academic institutions or organizations could purchase and customize the software to match their branding and specific needs. This approach would allow for greater flexibility and customization for each client.
3. **Consulting and Implementation Services:** The team behind the project could offer consulting and implementation services to other academic libraries interested in adopting similar 3D library resource systems. This could include assisting with integrating the system into existing library management systems, training staff, and providing ongoing technical support.
4. **Custom Development and Integration:** Some institutions might have unique requirements or existing systems that need integration with 3D library resources. Offering custom development and integration services could be a lucrative avenue for the project team.
5. **Content Creation and Conversion Services:** Many libraries might lack the resources or expertise to convert their existing resources into 3D formats. The project team could offer content creation and conversion services, where they transform the library's resources into 3D formats suitable for the VR Discovery system.
6. **Professional Development and Training:** Workshops, training programs, and online courses could be developed to help librarians and educators maximize the VR Discovery system and effectively integrate 3D resources into their teaching and learning strategies.
7. **Partnerships with Educational Publishers:** A mutually beneficial arrangement could involve collaborating with educational publishers to integrate their content into the 3D library resource platform.
8. **Continuous Enhancement and Feature Expansion:** As the VR Discovery system gains traction, continuous enhancement and feature expansion could be offered as premium services. Institutions could pay for access to advanced features, updates, and new functionalities.
9. **Research Collaboration:** The project could collaborate with research institutions and companies to explore innovative applications of 3D resources in various fields beyond education, such as medical training, engineering simulations, and more.
10. **International Market Expansion:** With the advancement of remote and online learning, there is potential to market the platform globally, catering to educational institutions and libraries beyond the project's immediate geographical area. The successful implementation of the project at USM provides a strong foundation for showcasing its value and potential to other academic

libraries and institutions. Careful planning, scalability considerations, marketing efforts, and a robust support structure will be crucial for successfully commercializing this innovative 3D library resource platform.

Acknowledgement

We extend our heartfelt gratitude to AMDI's Director, the Chief Librarian, dedicated library staff, lecturers and the accomplished IT Team for their unwavering commitment and exceptional contributions to the success of the project '3D Library Resources: A Powerful Tool in Enhancing Educational Resources and Student Accessibility'. Their collective efforts, visionary leadership, and technical expertise have propelled this endeavour to heights, revolutionizing educational resources and fostering student accessibility. This achievement is a testament to their collaborative spirit and dedication, enriching our institution's impact and embracing innovative possibilities for the future.