

## Abstract

American University Game Lab and FableVision Studios propose a national forum on best practices in developing and presenting effective game programs in libraries to enhance the training and professional development of library staff and faculty. The forum will bring together diverse stakeholders including leadership in school, public, college, and university libraries to discuss and disseminate best practices and future trends for library game programs. A diverse set of digital deliverables will be created from the forum and disseminated to libraries around the U.S.

Recently produced learning frameworks, created by library associations, have issued a strong call to integrate digital and 21st Century Skills into the library experience. The Future Ready Librarians framework encourages the formation of collaborative spaces as well as learning and professional development that focus on creativity, innovation, and the active use of technology as well as critical thinking, information literacy.

Innovative librarians familiar with current practices in game-based education, game creation, and game literacy have already seen the immediate connection between the foundational skills listed in these types of library frameworks and the parallel research and opportunities that exist in the field of game-based education and game-based research.

The **AU National Forum on Libraries and Games** will allow these innovators in the library field to come together experts in game design thinking to define a series of best practices that will connect the use of games directly to existing library frameworks. The national forum will assemble thought leaders, program managers, and creative game designers to identify best practices and new approaches in library game programs. The forum presentations will be augmented by videos, animations, and online demos that provide concrete suggestions for how libraries can add game programs to their existing efforts.

The proposed program consists of three major integrated components: **Leader's Forum**, **National Forum**, and **the Library Game Programs Resource**. The Leader's Forum will convene a panel of innovative librarians, library game program creators, and experts in game design thinking to set the agenda and schedule for the National Forum. The 2-day National Forum will be hosted by American University in Northwest DC in March of 2019. It will feature a hybrid conference/unconference format that will include a keynote address, panel sessions, round-table discussions, and participant-directed brainstorming sessions. The second day of the forum will focus on hands-on demonstrations of exemplary library game programs, innovative games adapted for libraries, and workshops on library game program design and management. The forum components will be videotaped and transcribed to provide project directors verbatim records from which they will produce an Executive Summary of key findings and examples. The project partners, AU Game Lab and FableVision will also create a Library Game Programs Resource website that will disseminate a suite of helpful digital deliverables including a Game Program Guidebook, explanatory videos and animations, and a repository of video recordings from the National Forum event.

## **SUMMARY**

American University Game Lab and FableVision Studios propose a national forum on best practices of developing and presenting effective game programs in libraries to enhance the training and professional development of library staff and faculty. The forum will bring together diverse stakeholders including leadership in school, public, and university libraries to provide best practices and future trends for games and game-based engagements. A diverse set of digital deliverables will be created from the forum and disseminated to libraries around the U.S.

## **STATEMENT OF BROAD NEED**

In recent years, library associations have created learning frameworks that fundamentally embed digital and 21st Century Skills into the library experience. The Future Ready Librarians framework includes core sections on collaborative spaces that "*promote inquiry, creativity, collaboration, and community*" as well as learning and professional development that focus on "*critical thinking, information literacy, digital citizenship, creativity, innovation and the active use of technology.*"

The American Association of School Librarians (AASL)'s framework has a series of "shared foundations" that include building knowledge by "inquiring, thinking critically, identifying problems, and developing strategies for solving problems" and exploring media in order to "discover and innovate in a growth mindset developed through experience and reflection."

Innovative librarians familiar with current practices in game-based education, game creation, and game literacy have already seen the immediate connection between the foundational skills listed in these types of library frameworks and the parallel research and opportunities that exist in the field of game-based education and game-based research. Game proposals regularly bubble up at major library conferences and school libraries, public libraries, and university libraries have all experimented with developing deeper connections to the game community. This experimentation is warranted given the deep and growing body of literature on the ability of games to connect with learners on a variety of levels from skill and community development to media and narrative literacy.

A national forum would allow these innovators in the library field to come together to define a series of best practices that will connect the use of games directly to existing library frameworks. These best practices will then be developed into professional development videos, animations, a microsite, and a report that can be shared with other librarians in the field. This national forum would move the library field forward by formalizing the most innovative game-based library practices currently in use, connecting those practices to existing library frameworks, and creating rich professional development media that can share these practices out widely to the field.

## **PROJECT DESIGN**

### **Background**

The proposed projects seek to stimulate connections between library science and game design thinking. It leverages research and best practices in these two complementary fields.

### Libraries and Digital Media Literacy

Libraries serve as community spaces (Lopez et al) and are playing an increasing role meeting the digital media literacy needs of their audiences (Knight 2017). As highlighted by the Joan Ganz Cooney Center – “public libraries are transforming to help families build digital literacy skills and become familiar with new technology” (Guernsey 2017).

### Libraries and Games

Libraries around the United States are leveraging games to engage a broad range of audiences in multiple ways. After-school game programs at libraries can increase interest STEAM fields. The STEM Video Game Challenge (IMLS 2014-16) guided and encouraged library and museum visitors to design and construct educational games. Through a wide variety of ‘serious games,’ library visitors can explore their cultural heritage (Roberts et al 1959), examine their core values (Flanagan and Nissenbaum, 2014), wrestle with challenging ethical scenarios (Schrier 2010), and develop skills for problem solving of complex processes (Grace and Jamieson, 2014 ). Students learn 21st century skills through educational games that focus on critical thinking and systems thinking (Shaffer and Gee, 2005). Examples of specific library programs include:

- NYPLarcade – Since 2013, Thomas Knowlton of the New York Public Library has been running NYPLarcade—an opportunity to play, watch, and discuss independent, experimental, and thought-provoking games in a library setting. Think of it as a book club, but for video games. (Knowlton, 2016).
- Houston Public Library Game Program - Sandy Farmer, manager of Central Youth Services for the Houston Public Library, oversees an active gaming program, which includes twenty gaming consoles a few big-screen TVs. "It's a primary part of our service that we offer, and it results in a 15- to 20-percent increase in the circulation of books" according to Farmer. (NPR, 20)
- Boston Public Library “Teen Gaming Specialists” – This youth-centered program promotes leadership skills by training teenagers to become Teen Gaming Specialists and Teen Tech Mentors (both paid positions) to assist in the management of the heavily trafficked Teen Central facility at BPL (YALS, 2017).
- Chicago Public Library – Vivian Alvarez, teen mentor at CPL, has studied the learning opportunities of tabletop games for students in their youth program based on the game’s reliance on luck, skill, or reading. “Modern tabletop games have become more reliant on skills, encouraging players to identify their own personal habits (because habits shape skills) and develop finesse where necessary in a face-to-face social arena.”
- *Factitious* Game Night – Montclair Public Library in New Jersey has been hosting collaborative game nights featuring the popular *Factitious* news game developed by Bob Hone and Maggie Farley of the AU Game Lab<sup>1</sup> (E. Hone, 2017)

### Games and Media Literacy

Games have become widely recognized for their ability to tell story in uniquely engaging ways (Gee, 2003), encouraging many players to seek out commentary and analysis of game design decisions – much like critiques and analysis of films or literature. This framing of

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<sup>1</sup> The *Factitious* online game has been played more than 580K times since its launch in July 2017. The AU Game Lab will release a new version/”season” of *Factitious* with new content in August to support use by teachers in the upcoming fall semester.

games as texts (Grace, 2011) is moving into vogue among education scholars (Consalvo and Dutton) and provides a new opportunity for libraries to link game analysis with the many other forms of media analysis provided in a library's collection. Researchers offer games as poetry (Grace 2011), as tools for teaching literacy (Gee 2014), as vehicles for rhetoric (Bogost 2009), and as cultural texts (Jones 2008). This newer perspective is in-part informed by the range of analysis on story and games discussed in the 18-year old International conference on Interactive Storytelling (<http://icids.org/> or Nunes et al). These efforts include a variety of adaptations of literature from academic research adapting games from literature (Grace, 2014) to the myriad of books turned into commercial games (Rad 2015)

### Societal Impact of Games

Since their emergence in the 1980s, video games have become an increasing part of Americans' entertainment, education, and training. Nearly 65% of American households are home to someone who plays video games regularly, and 67% of American households own a device used to play video games (Electronic Software Association, 2017). More than 150 million Americans play video games (Electronic Software Association, 2017) and in 2016, self-described "gamers" were 65% of the US population over the age of 13 (Nielsen, 2017).

Over the past 15 years, parallel to the advances in entertainment video games, a 'serious' games field has emerged with games that combine the engagement design strategies of video games with specific scientific, health, or training goals. The human computation game FoldIt! has helped protein scientists identify protein folding configurations. A similar computation game, Smorball, helped the Biodiversity Heritage Library perform quality control on automatic OCR of historic seed and nursery catalogs to improve the accuracy of the digital conversions. Major educational publishers such as Pearson and McGraw-Hill feature game-based educational modules to help students learn math, science, and system-level thinking. Innovative health gaming therapies are improving the lives of people with anxiety (*Seeing the Good Side*, Hone 2017), depression (*SuperBetter*, McGonigal 2017), Parkinson's disease (*Games for Gait and Balance*, Hone 2013), and many other health conditions. Librarians around the country are leveraging these efforts to provide a broad range of game-based educational experiences to their audiences.

In addition to the scholarly and educational benefits of games, there are professional and social benefits as well. Communities form around games, offering libraries the opportunity to become conveners of those communities. Likewise, workforce development opportunities exist including through STEM skill development and coding. Those who have no access to games are left out of these opportunities. As the Higher Education Video Game Alliance notes, 44.2% students of game design and development programs go on to other vital industries, including education, software development and government/security/defense, as well (Priming the Pump 2015).

### **Program Goals and National Forum Deliverables**

The AU National Forum on Libraries and Games will explore, discuss, document, and disseminate information about innovative game programs developed by libraries throughout the United States. The national forum will assemble thought leaders, program managers, and creative game designers to identify best practices and new approaches in library game programs. The forum presentations will be augmented by videos, animations, and online demos that provide concrete suggestions for how libraries can add game programs to their existing efforts.

The proposed national forum will follow the successful model the AU Game Lab executed for its recent *JoLT Initiative* which explored and reported on practical strategies and best practices for applying game design thinking to the challenges of journalism. This project included the *JoLT Summit*, held in October of 2016 that included keynote presentations, panel sessions, round table discussions, and demonstrations of innovative news games. The JoLT team then compiled and disseminated the useful *JoLT Toolkit*, which provides numerous case studies of successful news games as well as practical suggestions to news directors on how to design and construct new game-based approaches.

The proposed program consists of three major integrated components: **Leader's Forum**, **National Forum**, and **the Library Game Programs Resource**, which are described in the following pages.

### Leader's Forum

The Leader's Forum will convene eight highly-influential and effective leaders who employ games in libraries and related initiatives (the "Leader's Panel"). During a series of web conferences in November 2018, project directors (Hone, Grace, and Collins) will collect and discuss innovative programs provided by the Leader's Panel. These experts will help project directors identify key trends to be explored during the national forum, select potential keynote speakers, and recommend potential panel speakers and possible on-site game exhibitions. The web sessions will be recorded and transcribed for later distribution leading up the **National Forum on Libraries and Games** event at American University in March 2019.

The project team has already identified and confirmed three members of the Leader's Panel (and three pending advisors). We will add additional experts to achieve a diverse panel of backgrounds, interests, and affiliations.

- Derrick Jefferson, Assistant Librarian, American University Library, is an active member in ALA as a participant in their Emerging Leaders program and is an editor for the *Journal of Creative Library Practice*.
- Matthew Farber ED.D., Assistant Professor, University of Northern Colorado, studies how educators use games in their classrooms to give students agency, while also teaching skills of empathy, systems thinking, and design thinking
- Thomas Knowlton, Outreach Librarian, NY Public Library manages the NYPLArcade, a venue within a library setting to discuss independent and experimental games. He also frequently blogs about the use of games in library settings.
- Sara Trettin, (pending Ed Dept approval) Policy Advisor, Department of Education, directs digital engagement for the Office of Educational Technology with a focus on libraries and librarians.
- Mark Ray (pending), Director of Innovation and Library Services, Vancouver Public Schools was Washington Teacher of 2012 and is a Future Ready Librarians Lead.
- Jennifer Boudrye (pending), K12 Development Director at Hanover Research, former Director of Library Programs for the District of Columbia Public Schools.
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## **National Forum on Libraries and Games**

Hosted by the American University Game Lab and Studio, the **AU National Forum on Libraries and Games** will assemble up to 100 individuals from around the country who have questions, goals, experience or concerns about use of games in libraries. Attendants will include K12, public, and university librarians, affiliated formal and informal educators, education tech thought leaders, as well as administrators from each of these fields.

The two-day event will consist of a hybrid conference/unconference on Day 1, which will feature a keynote address, panel sessions, round table discussions, and participatory brainstorming sessions. Day 2 of the event will feature hands-on demonstrations of innovative game programs currently in use at libraries around the country as well as workshops on starting and maintaining a library games program.

The following preliminary structure of the event is intended only to present a rough idea of what the event may include. The actual schedule and structure will be developed in close collaboration with members of the Leader's Panel during the Leader's Forum meetings in November and December.

### *National Forum – Day 1*

- **Keynote Address** – We will recruit an acknowledged leader in the field of library science and its intersection with games and game design thinking to present an inspiring talk to kick off the event.
- **Panel Sessions** – During the Leader's Forum, we will identify and recruit innovative librarians from a broad range of libraries (public school libraries, public libraries, college and university libraries) to present case studies about their successful game programs. Some of the panel speakers will be drawn from the Leader's Panel. Potential topics include:
  - Adapting consumer games to library audiences
  - Media and narrative literacy of games programs that increase circulation
  - Stimulating youth interest in computer science books through game modding (e.g. Minecraft)
  - Play the News, *Factitious Game Night* in libraries.
- **Round Table Discussions** – These guided roundtable events will expand on topics introduced by the panelists. The experience of this unconference is designed around enabling, empowering and educating attendees on the uses of games in libraries. The particular focus is on helping attendees understand how to employ games to the service of crossing the digital divide, through games events, community engagement and resources.
- **Brainstorming Sessions** – At the start of the event, project organizers will call attention to several "Idea Boards" located through the event space and encourage participants to post suggestions for ideas or concepts to be explored during the Brainstorming Sessions in afternoon sessions of Day 1. Participants will also be encouraged to add check marks to any topics they find interesting. Project Directors (Hone, Grace, and/or Collins) will repeat these encouragements after the Keynote and

before the lunch break. The Project Directors will then tabulate the “votes” for topics and announce the list and locations of the Brainstorming sessions at the end of the Round Table discussions.

### *National Forum - Day 2 Showcase*

The AU Game Lab will host and document an experiential Showcase on the second day of the event that will feature hands-on demonstrations of innovative games and activities from libraries around the U.S. Presentations of the Showcase will draw from the AU Game Lab’s deep experience in co-organizing large events for the Smithsonian American Art Museum, curating events for Games for Change, the Knight Foundation, the Center for Social Media Impact, among others.

The showcase is designed to address several key needs:

- Provide first-hand experience for participating librarians and library experts
- Provide experiential education in the inclusion of games in library resources
- Increase librarians’ comfort the technologies and support resources

Day 2 of the event may also include several workshops presented by members of the Leader’s Panel or other experts in the development and management of library game programs. The anticipated impact of such workshops will be evaluated by the Leader’s Panel and their recommendations will inform the decision on whether to include workshops in the National Forum.

### **Library Game Programs Resource**

To maintain and accelerate the national forum’s energy and insights, the AU Game Lab and Studio, in collaboration with production partner FableVision, will create a diverse set of deliverables that will be disseminated through the proposed program’s web site (tentatively titled the Library Game Programs Resource). The exact collection of deliverables will be informed by discussions of Leader’s Forum; however, the following list provides our preliminary plans for these deliverables.

- *National Forum Executive Summary* – The project directors, Hone, Grace, and Collins, will create a focused executive summary of the two-day event. Draft versions of the executive summary will be reviewed with members of the Leader’s Panel for their input and feedback. The final version will be presented online and as a downloadable PDF to facilitate broad dissemination and potential press coverage.
- *Library Game Programs Guidebook* – This section of the website will consist of descriptions, photos, and videos of the case studies presented at the conference. The guide will be designed as a highly accessible resource directing readers to the recipes that have worked best for given communities, quoting individuals who have done work with games in libraries, and directing them to appropriate resources. Please see the *JoLT Guidebook* in supplementary documents section of this proposal for an example of this type of deliverable. This section will also include instructions for how libraries can propose and upload new case studies as they become available in the future
- *Exploratory videos, animations, and online demos* – This section will include videos and animations developed by FableVision to illustrate key concepts, video recordings of the national forum panels and sessions, as well as video demos and online interactives provided by national forum participants.

### **Prior Experience with Similar Projects**

American University's Game Lab and Studio, led by Lindsay Grace and Bob Hone, focuses on exploring the use of games in non-traditional settings. With the support of the American University Library, the Game Lab will provide hosting and framing for the event along with the technical infrastructure to host. The game lab faculty have collectively hosted 3 forums and summits with approximately 100 people in attendance in the last 3 years. These include the Jolt Journalism and Leadership training summit, the Games Plus and Games Diversity summit. Dr. Grace has also co-chaired the annual International Conference in Games Jams and Hackathons in San Francisco since 2017.

The American University Game Lab serves as a hub for experiential education, persuasive play research, and innovative production in the fields of games for change and purposeful play. It has been a top-25 ranked game design program for the past 4 year and a leading research community for social impact, educational and community centers use of games.

FableVision Studios is an award-winning developer of digital educational media co-founded by children's author and illustrator Peter H. Reynolds. FableVision Studios will create the visualizations and interactive guides to better communicate the results of the forum with the field. FableVision will also commit James Collins, formerly of the Department of Education, to help organize the summit. James organized game-based education summits for the Department and supported the work of the Department's Future Ready Librarians program.

### **American University School of Communication and Game Lab Facilities**

The National Forum will be hosted by the AU School of Communication, which oversees the AU Game Lab in collaboration with the College of Arts and Sciences at AU. The structured elements as the beginning of Day 1 (keynote, panel sessions) will be presented at the Forman Theatre in the School of Communication's McKinley Building on the AU campus in Northwest DC. The Forman Theatre can host up to 150 people, which will be sufficient to support the expected audience. The more informal activities in the afternoon of Day 1 (round table discussions and brainstorming sessions) will be held in the Media Innovation Lab (also located in McKinley) as well as nearby classrooms (as needed). The event is currently planned to occur during AU's spring break to avoid any conflicts with existing uses of the Forman Theatre and Media Innovation Lab.

The Day 2 Showcase will be hosted at the AU Game Lab's new facilities in the Don Myers Innovation Technology Building on AU's recently opened East Campus (a 5-minute walk from the School of Communication). The Game Lab features a hybrid structured and open floorplan with moveable whiteboards and monitors conducive to stimulating discussions.

### **Project Management**

The project directors, Hone, Grace, and Collins, will collaborate closely on all phases of the proposed program. Each of the directors contribute particulate skills and expertise to the endeavor.

- PI Robert Hone (AU Game Lab) – Mr. Hone will have primary responsibility for top-level management of the project including contact with IMLS staff, members of the



Leader's Forum, and AU administration and facilities. Mr. Hone currently manages the AU Game Studio, which collaborates with external organizations such as the National Institutes of Health, Education Testing Service, World Bank, and WGBH-NOVA to develop and disseminate innovative educational and health games. Prior to joining the AU faculty in 2015, Mr. Hone was the Founder and Creative Director of an innovative interactive design and production company, Red Hill Studios, which received more than \$8M in funding from the NIH and NSF to develop innovative software. Please see Hone's biosketch for additional information.

- Dr. Lindsay Grace (AU Game Lab) – Dr. Grace will work closely with PI Hone and help guide the direction of the proposed program, particularly with respect to game analysis as a form a media literacy and game design thinking. Dr. Grace is the Founding Director of the AU Game Lab and an acclaimed developer of insightful and innovative independent games including *Black Like Me*, *Wait*, and *Big Huggin*.
- James Collins (FableVision) – Mr. Collins will work closely with PI Hone and Dr. Grace on all aspects of the proposed program including the Leader's Forum, the National Forum on Library and Games, and the Library Game Programs Resource. He will manage the production of digital deliverables by FableVision artists, animators, and video producer/directors.

### **Promotion Plan – National Forum**

Project Directors Hone, Grace, and Collins will collaborate with the Associate Dean of School of Communication's Department of Communication and Outreach, John Zollinger, to develop a targeted promotion plan to generate interest and participation in the National Forum on Libraries and Games. We have included \$1,000 in the project budget to support paid advertising. The School of Communication will also contact members of the DC area newsmedia, with whom AU has ongoing internship and collaborative programs (e.g. the Washington Post, Vox Media, the Atlantic, and WAMU, which broadcasts from the AU campus).

The promotion plan will also include outreach to leading library and ed tech organizations including the American Library Association, American Association of School Librarians, the International Society for Technology in Education (ISTE), and philanthropies working in this area such as the Knight Foundation which has an ongoing relationship with American University and funds a priority related to the Future of Libraries. The AU Library representative on the Leader's Forum, Mr. Derrick Jefferson, will collaborate on these organizational outreach efforts. Project staff will augment these efforts with targeted outreach (emails and phone calls) to public libraries, public school and public charter school libraries, as well as college and university libraries. In addition, FableVision will reach out to its 65,000 educator network to promote the event and widely share the post-event deliverables and report.

### **BROAD IMPACT - Meeting LB21 Program Goals**

The project aims for broad impact through a national forum, which helps to collect best practices widely across libraries. It also aims to advance the practice of using games as a means of increasing engagement with libraries, in advancing digital literacy and systems thinking skills with patrons, and as a tool to springboard STEAM education. Beyond increasing the toolset, resources and guides available to the national community of libraries, it also aims to help a specific subset of underserved communities by supporting their travel to and inclusion in the

national forum via travel stipends. This is also enhanced by the combination of an leading academic institution's infrastructure with an award winning developer of digital media for learning.

The benefactors of such work are not only the library professionals and their patrons, but the network of community members who gain access to thriving cultural practice, game-making, and industry. As mentioned, games have a well-documented history as means of convening cultural value, explaining complex systems, changing perspective and providing exposure to new ways or problem solving.

### **DIVERSITY PLAN**

The forum will include public, private, school, and university library and librarian voices. Every effort will be made to include representation from urban, rural, and other underserved populations as has been the focus at prior American University events such as the annual Diversity in Games Summit. The organizers will leverage partnerships with education and technology organizations aligned with the Future Ready Librarians program to increase the reach of the reports and to sponsor travel.

### **Supporting Diverse Library Communities**

A portion of the funds will be used to cover the travel expense of four library leaders from underserved rural and urban communities to insure that their voices contribute to the discussions. We will reach out to contacts in the library field to request nominations of deserving librarians. The Leader's Panel will then review the nominations and create a ranked list of six potential recipients (four preferred and two back-ups in case one or more of the preferred recipients cannot attend the event).



## **Introduction**

The Institute of Museum and Library Services (IMLS) is committed to expanding public access to federally funded digital products (i.e., digital content, resources, assets, software, and datasets). The products you create with IMLS funding require careful stewardship to protect and enhance their value, and they should be freely and readily available for use and re-use by libraries, archives, museums, and the public. However, applying these principles to the development and management of digital products can be challenging. Because technology is dynamic and because we do not want to inhibit innovation, we do not want to prescribe set standards and practices that could become quickly outdated. Instead, we ask that you answer questions that address specific aspects of creating and managing digital products. Like all components of your IMLS application, your answers will be used by IMLS staff and by expert peer reviewers to evaluate your application, and they will be important in determining whether your project will be funded.

## **Instructions**

- Please check here if you have reviewed Parts I, II, III, and IV below and you have determined that your proposal does NOT involve the creation of digital products (i.e., digital content, resources, assets, software, or datasets). You must still submit this Digital Product Form with your proposal even if you check this box, because this Digital Product Form is a Required Document.

If you ARE creating digital products, you must provide answers to the questions in Part I. In addition, you must also complete at least one of the subsequent sections. If you intend to create or collect digital content, resources, or assets, complete Part II. If you intend to develop software, complete Part III. If you intend to create a dataset, complete Part IV.

## **Part I: Intellectual Property Rights and Permissions**

**A.1** What will be the intellectual property status of the digital products (content, resources, assets, software, or datasets) you intend to create? Who will hold the copyright(s)? How will you explain property rights and permissions to potential users (for example, by assigning a non-restrictive license such as BSD, GNU, MIT, or Creative Commons to the product)? Explain and justify your licensing selections.

Intellectual property to any of the products will remain with American University (AU). However, the final digital deliverable (Library Game Programs Resource) will be free to use by non-profit organizations.

**A.2** What ownership rights will your organization assert over the new digital products and what conditions will you impose on access and use? Explain and justify any terms of access and conditions of use and detail how you will notify potential users about relevant terms or conditions.

AU will provide royalty-free, non-exclusive, not-transferrable, in perpetuity licenses to non-profit organizations. AU will negotiate in good faith with for-profit organizations regarding possible license(s) for AU's IP.

**A.3** If you will create any products that may involve privacy concerns, require obtaining permissions or rights, or raise any cultural sensitivities, describe the issues and how you plan to address them.

The proposed National Forum on Libraries and Games will include videotaping of participants. We will collect digitally signed personal release forms from all participants in the national forum that allows AU to use audio recordings and/or video recordings of them for promotional purposes related to the National Forum only.

The materials of the Digital Deliverables of this project will be reviewed by members of the project Leader’s Panel with the specific instructions to look for any potential issues involving cultural sensitivities. If such issues arise, the project team will revise the content (image, audio, and video recordings) to remove any offending material or make such modifications as may be necessary to remove the objectionable content.

**Part II: Projects Creating or Collecting Digital Content, Resources, or Assets**

**A. Creating or Collecting New Digital Content, Resources, or Assets**

**A.1** Describe the digital content, resources, or assets you will create or collect, the quantities of each type, and format you will use.

A major component of the proposed product is the design and production of multiple digital assets based on the findings of the National Forum on Libraries and Games. The likely digital format for these materials will include:

Media Type	Likely formats
Text assets	.doc, .pdf
Graphics – static	.jpg, .png, .gif
Graphics - animation	.mov, .fla, .mp4
Audio assets	.aif, .ogg, .wav
Video assets	.mp4, H.264, .mov, .wmv
Programming assets	.html, .css, .js, .py, .sqlite3

Likely types of assets will include:

- Online or print promotional materials, including text, graphic, or video elements
- Case study reviews that will include txt, graphic, animation and video.
- Video recordings of presentations at the National Forum
- Animations of National Forum key concepts

**A.2** List the equipment, software, and supplies that you will use to create the content, resources, or assets, or the name of the service provider that will perform the work.

The AU Game Lab operates a hybrid academic/entrepreneurial design and production Studio for collaborations with external partners. The final digital deliverables will be stored and distributed through the AU Game Lab’s account with Digital Ocean (a leading cloud storage and virtual servers service company).

The Game Lab currently maintains the following equipment to support the design and production of the projects digital deliverables.

- 12 Macintosh desktop computers (iMac 3.5GHz Intel Core i7, 16GB RAM))
- 4 Dell Laptops (Dell Alienware, Intel Core i7, 16GB RAM, Windows10)
- 2 Dell desktop computers (Optiplex 3046, Intel Core i7, 16GB RAM )
- 3 iPad tablets (4<sup>th</sup> generation)
- 4 Android tablets (Nexus 7, 7-inch, 16GB)

The Macintosh interactive media production computers have a suite of production software including:

- Adobe Creative Suite (Photoshop, Illustrator, Premiere, After Effects, etc.)
- Unity Software Development Kit
- Maya (3D software)
- Sublime Text (HTML5 scripting program)

In addition, the School of Communication and Media Production Center at AU have extensive audio and video facilities for media production:

- Professional video production and editing suites
- Professional audio production and editing suites
- Green screen production studio with full cove

**A.3** List all the digital file formats (e.g., XML, TIFF, MPEG) you plan to use, along with the relevant information about the appropriate quality standards (e.g., resolution, sampling rate, or pixel dimensions).

Media Type	Likely formats
Text assets	.doc, .pdf
Graphics – static	.jpg, .png, .gif
Graphics - animation	.mov, .fla, .mp4
Audio assets	.aif, .ogg, .wav
Video assets	.mp4, H.264, .mov, .wmv
Programming assets	.html, .css, .js, .py, .sqlite3

Media assets used in the user interface screens of the project’s website will be optimized to minimize performance delays due to network transmission bandwidth issues.

Downloadable assets, such as the Library Game Program Guidebook will be lightly compressed to retain high visual or aural quality.

**B. Workflow and Asset Maintenance/Preservation**

**B.1** Describe your quality control plan (i.e., how you will monitor and evaluate your workflow and products).

**B.2** Describe your plan for preserving and maintaining digital assets during and after the award period of performance. Your plan may address storage systems, shared repositories, technical documentation, migration planning, and commitment of organizational funding for these

purposes. Please note: You may charge the federal award before closeout for the costs of publication or sharing of research results if the costs are not incurred during the period of performance of the federal award (see 2 C.F.R. § 200.461).

There will be three digital repositories for the project:

- Collaborators Google Drive
- Project Production Google Drive
- Remote Server through account at Digital Ocean

Collaborators Google Drive – We will create an organized Collaborators Drive that will hold all collaborative reports, meeting notes, research materials and plans for the National Forum. Members of the Leader’s Panel will have view and edit privileges to this drive. Members of the FableVision production team will also have access to this drive. At the conclusion of the project, these materials will be transferred to an internal AU repository.

Project Production Google Drive – We will create an organized Project Production Google drive that will hold internal documents created by the AU and FableVision project teams. View and edit access will be provided to project team members at AU (Hone, Grace, Jefferson, Fender, select graduate students) and at FableVision. At the conclusion of the project, these materials will be transferred to an internal AU repository.

Digital Ocean Server – AU maintains an account at Digital Ocean to hold programming assets as well as all publically facing web applications and sites (and their back-ups and alternate versions). At the conclusion of the project, a copy of the files related to this project will be transferred to an internal AU repository. Active web sites, such as the proposed Library Game Programs Resource will be maintained for three years.

### **C. Metadata**

**C.1** Describe how you will produce any and all technical, descriptive, administrative, or preservation metadata. Specify which standards you will use for the metadata structure (e.g., MARC, Dublin Core, Encoded Archival Description, PBCore, PREMIS) and metadata content (e.g., thesauri).

Final Digital Deliverables archived on AU’s internal repositories (Library Game Programs Resource and Executive Summary) will use the Qualified Dublin Core standard.

“Work in progress” documents will not be cataloged with Meta Data due to their preliminary and rapidly iterative nature.

**C.2** Explain your strategy for preserving and maintaining metadata created or collected during and after the award period of performance.

American University supports a campus wide digital storage capability through the Microsoft One Drive service. Final deliverables will stored through this service.

**C.3** Explain what metadata sharing and/or other strategies you will use to facilitate widespread discovery and use of the digital content, resources, or assets created during your project (e.g., an API [Application Programming Interface], contributions to a digital platform, or other ways you might enable batch queries and retrieval of metadata).

Project staff will disseminate information about the Digital Deliverables through outreach to leading library and ed tech organizations including the American Library Association, American Association of School Librarians, the International Society for Technology in Education (ISTE), and philanthropies working in this area such as the Knight Foundation which has an ongoing relationship with American University and funds a priority related to the Future of Libraries. The AU Library representative on the Leader's Forum, Mr. Derrick Jefferson, will collaborate on these organizational outreach efforts. In addition, FableVision will reach out to its 65,000 educator network to promote the event and widely share the post-event deliverables and report.

#### **D. Access and Use**

**D.1** Describe how you will make the digital content, resources, or assets available to the public. Include details such as the delivery strategy (e.g., openly available online, available to specified audiences) and underlying hardware/software platforms and infrastructure (e.g., specific digital repository software or leased services, accessibility via standard web browsers, requirements for special software tools in order to use the content).

The primary Digital Deliverable, the Library Game Programs Resource web site, will be freely available online.

**D.2** Provide the name(s) and URL(s) (Uniform Resource Locator) for any examples of previous digital content, resources, or assets your organization has created.

<http://factitious.augamestudio.com> - news game that challenges players to tell if an online article is real or fake.

### **Part III. Projects Developing Software**

**A.1** Describe the software you intend to create, including a summary of the major functions it will perform and the intended primary audience(s) it will serve.

The Library Game Programs Resource website will be created using HTML/CSS/JS (angular framework).

**A.2** List other existing software that wholly or partially performs the same functions, and explain how the software you intend to create is different, and justify why those differences are significant and necessary.

The AU web development environment is usually and customary for professional web development.

#### **B. Technical Information**



**B.1** List the programming languages, platforms, software, or other applications you will use to create your software and explain why you chose them.

Javascript (JS) – Angular framework

**B.2** Describe how the software you intend to create will extend or interoperate with relevant existing software.

Javascript is one of the core components of HTML5.

**B.3** Describe any underlying additional software or system dependencies necessary to run the software you intend to create.

The Library Game Programs Resource website will run in modern web browsers (>2012).

**B.4** Describe the processes you will use for development, documentation, and for maintaining and updating documentation for users of the software.

All programming source code is managed and updated through git accounts.

**B.5** Provide the name(s) and URL(s) for examples of any previous software your organization has created.

<http://factitious.augamestudio.com> - news game that challenges players to tell if an online article is real or fake.

### **C. Access and Use**

**C.1** We expect applicants seeking federal funds for software to develop and release these products under open-source licenses to maximize access and promote reuse. What ownership rights will your organization assert over the software you intend to create, and what conditions will you impose on its access and use? Identify and explain the license under which you will release source code for the software you develop (e.g., BSD, GNU, or MIT software licenses). Explain and justify any prohibitive terms or conditions of use or access and detail how you will notify potential users about relevant terms and conditions.

Intellectual property to any of the products will remain with American University (AU). However, the digital products will be free to use by non-profit organizations.

**C.2** Describe how you will make the software and source code available to the public and/or its intended users.

The final HTML5 (HTML, CSS, JS) files for the project website will be stored in a public git repository.

**C.3** Identify where you will deposit the source code for the software you intend to develop:  
Name of publicly accessible source code repository:

URL:

The final programming files for the project website will be stored in a public git repository.

#### **Part IV: Projects Creating Datasets**

**A.1** Identify the type of data you plan to collect or generate, and the purpose or intended use to which you expect it to be put. Describe the method(s) you will use and the approximate dates or intervals at which you will collect or generate it.

No data will be collected from the members of the Leader's Forum or participants in the National Forum other than the personal appearance releases allowing AU to use recordings of them for promotional purposes regarding the National Forum.

**A.2** Does the proposed data collection or research activity require approval by any internal review panel or institutional review board (IRB)? If so, has the proposed research activity been approved? If not, what is your plan for securing approval?

No

**A.3** Will you collect any personally identifiable information (PII), confidential information (e.g., trade secrets), or proprietary information? If so, detail the specific steps you will take to protect such information while you prepare the data files for public release (e.g., data anonymization, data suppression PII, or synthetic data

The only PII will be the personal appearance release forms, which will be stored in AU's, secure, internal digital storage system.

**A.4** If you will collect additional documentation, such as consent agreements, along with the data, describe plans for preserving the documentation and ensuring that its relationship to the collected data is maintained.

The personal appearance release forms will be stored and catalogued with other permanent data from the project (Library Game Programs Resource).

**A.5** What methods will you use to collect or generate the data? Provide details about any technical requirements or dependencies that would be necessary for understanding, retrieving, displaying, or processing the dataset(s).

The personal appearance release forms will be included in registration for the National Forum event.

**A.6** What documentation (e.g., data documentation, codebooks) will you capture or create along with the dataset(s)? Where will the documentation be stored and in what format(s)? How will you permanently associate and manage the documentation with the dataset(s) it describes?

The personal appearance release forms will be stored and catalogued with other permanent data from the project (Library Game Programs Resource).

**A.7** What is your plan for archiving, managing, and disseminating data after the completion of the award-funded project?

All permanent data from the project (Library Game Programs Resource, consent forms) will be archived in AU's internal digital storage system.

**A.8** Identify where you will deposit the dataset(s):

Name of repository:

URL:

TBD

**A.9** When and how frequently will you review this data management plan? How will the implementation be monitored?

The data management plan will be reviewed at the start of the project and prior to archiving at the end of the 1-year project.