All questions and completed forms should be sent to staff@atlarge.icann.org
Please remember that the deadline for FY17 Budget consideration is
January 22th 2016.

REQUEST INFORMATION

Title of Proposed Activity	
Creation of Augmented Reality (AR) Multimedia Resources	
Community Requestor Name	Chair
ALAC Wide - NARALO	Glenn McKnight
ICANN Staff Community Liaison	
Heidi Ulrich	Submitted by Alfredo Calderón

request description

1. Activity: Please describe your proposed activity in detail

ICANN has created introductory guidebooks for newcomers / learners on various aspects of the ICANN Eco space. These materials are either limited print format or on a non-interactive PDF Format. This proposal suggests an updating of the materials to become Augmented Reality (AR) printed resources (infographics, short video clips, enhanced comic strips, etc.) for use in conjunction with mobile devices, and other devices capable of displaying multimedia resources. Secondly, the material would take advantage of the add-on features of audio reading and video for existing and new material developed. This represents an enhancement to a previous initiative approved. Here is a link to a short video clips produced by Glenn McKnight and Alfredo Calderon on the topic - https://www.youtube.com/watch?v=8kAK-VHwItA. Request funding is $5,000. (Attachment 1: Budget)

Key Benefits
- Printed material (e-books, hardcopy material) enhanced with AR are searchable. You can easily search for any information in an e-book, instead of turning page after page.

- Printed material with AR can be interactive and contain audio, video and animations, which can enhance the message that the author is trying to convey.

- With some resources tracking of downloads and clicks through are features embedded as part of design.

- Free wide scale distribution channels to share e-books (i.e. Google Play, Archive.org, iTunes, Amazon and more.

- Augmented Reality (AR) e-Books allows views of "real world" with additional information, presented digitally. 3D images can be integrated with the appropriate tools.

- Short video clips using AR Markers will be explored as an engagement approach.

Conversion of ICANN training materials and ALAC printed documents to a printed AR enhanced format, integration of text material with available videos and podcasts which are currently not linked to the learning resources and the conversion of text file to audio and video clip, and in some instances a 3D/2D component will enhance user comprehension understanding topic. Visual printed resources (infographics, comic strips, etc.) will entice newcomers and next generation of prospect members to ICANN if AR technology is embedded within documents. Thus, allowing versatility when presented ICANN's vision and mission.

As an initial step, once approved the funding, pursue the task of organizing Working Group to evaluate content and materials to be produced. Agree with the proposed terms of hiring undergraduate students to design, develop and produce materials proposed by group.

Design and development of printed resources to reflect AR enhancements requires at least a **twelve (12) month** period to:

1. Collect, Design and Produce printed material (infographics, etc.).
2. Design and produce multimedia resources to embed markers with AR content (3D or 2D Models, short video clips).
3. Design and create new 2D/3D Models, as needed.
4. Design short video clips with Sparkol and create a repository (YouTube Channel) from where videos can be shared with other ICANN constituents.

Among the technical skillsand requirements to be sought among students hired (at a $10.00 per hour rate) are:
- Capable of using **Sparkol** (http://www.sparkol.com/) a tool to produce video animations with audio (music or voiceover) to communicate with drawing on a whiteboard and communicating a message to the audience. (See a short video animation at https://youtu.be/hqGYxF2wfJw). Lifetime license cost: **$665.00**
- Skills to use **SVG software** (open source) to develop 2D images and 3D Models for **Aurasma Studio** an augmented reality application. Free access.
- Capable of working with minor supervision to integrate everyday objects, images, and places into new, interactive opportunities to engage with individuals interested in ICANN opportunities to collaborate through striking graphics, animation, video, audio, and 3D content.
- To have access to a computer meeting minimum requirements and Internet access, to develop and produce desired materials.

Request Objectives

1. *Strategic Alignment.* Which area of ICANN's Strategic Plan does this request support?

ICANN Strategic Plan Item 3.3

Develop a globally diverse culture of knowledge and expertise available to ICANN's Board, staff and stakeholders

Distribution of materials to wider group of ICANN and non ICANN communities.

- Engage next generation of ICANN community and prevent insular and expose stakeholders to the new and innovative technologies to decrease barriers of ICANN participation.
- Production of some accessible materials to the visually impaired communities through corresponding audio transcription of materials enabling a greater outreach to the disabled communities which represent 13% of the world population.
- The AR enhancement will assist audio impaired communities to visually comprehend knowledgebase resources available and new material developed as well as individuals with diverse learning styles.
- Enhanced understanding of community position papers by the conversion of print version of policy papers to an audio-visual enhanced format (AR, infographics, video clips, comic strips,
- Provide versatility when informing operational, technical and legal decisions within and outside the ICANN community.
- Support the World health Organization (http://www.who.int/disabilities/technology/en/) goal related to "creating a repository on training resources available to mobile devices and technologies for diverse audiences with certain disabilities."

The entire ICANN ecosystem with special emphasis on the newcomers and newly elected/appointed committee members, Persons with Disabilities and all learners (for http://learn.icann.org/) who have a preference to view short video clips, enhanced 2D/3D images (as a result of "real world" view) or listen to video clip versions of printed materials. Providing alternative devices and enriched learning environments to utilize existing learning modules and under-development resources.

One advantage to this approach will acknowledge the potential of new strategies to entice civil society in ICANN work groups and their role in innovating opportunities to learn through virtual environments and mobile devices.

Outcomes

AR Printed Resources & video clips for Learning Modules
- Video, 3D images and Audio track to compliment printed materials
- Provide platform flexibility to learners
- Production of properly configured resources viable on mobile devices
- Choice and convenience to end user
- Expand the usability and use of existing resources and new material produced
- Engage next generation prospects to ICANN / ISOC workgroups

ALAC Position Papers
- Conversion of ALAC recommendations ie. PIC from PDF into E-version with Audio file to provide flexibility and accessibility. **NOTE**: This initiative enhances and increases versatility using emergent technologies to model what Internet is all about.

4. *Metrics.* What measurements will you use to determine whether your activity achieves its desired outcomes?

- Number of learning materials, and ALAC Position papers converted to AR enhanced resources.
- Number of new printed materials produced enhanced with Augmented Reality markers.
- Increase in viewership
- Tangible demonstration of accessible materials for multiple intelligence learners
- Number of downloads
- Number of clicks to Instructional Augmented Reality repository and YouTube videos
- Detailed analytics of global viewership by platform
- User feedback on resources and suggestions
- Integration of distributed resources not currently incorporated into printed materials

Resource Planning – incremental to accommodate this request

Staff Support Needed (not including subject matter expertise):

Description	Timeline	Assumptions	Costs basis or parameters	Additional Comments
ICANN work group to review and select materials suitable for conversion to printed AR format	Depends on number of documents converted and / or created, but limited to a twelve-month period.	Decision to do one document as a test or do all the materials	**$5,000**	The time allocation can vary depending upon the staff interest in this project
ICANN work group will review and suggest appropriate 3D/2D images and multimedia resources owned suggest development as added value to resources: learning module or desired documents.	Twelve months		**Aurasma Studio** (software- https://www.aurasma.com/get-started/) **Free to use.** **Sparkol** (software - https://my.sparkol.com/buy. Lifetime license **$665.00**	The task involves collating the range of 3D/2D images, video and audio clips and assessing their relevance. Some 3D images or AR will need to be developed. Time allocation can vary. Must consider licensing to acquire software and or develop images.
ICANN work group review and comment on the Augmented Reality / 3D images / audio resources added. As well as printed materials developed (comic strips, infographics, etc)	Depends on number of documents converted and required AR material needed.			Exhaustive testing of AR display in various platforms would be required. Therefore, a team of reviewer is important to avoid errors.

Tasks

- Proponent (Alfredo Calderón) will supervise hiring students and deliverables, by students based on needs identified. Annual fee: **$1,000**
- See *Proposed Timeline/Schedule* for tasks and required skills of students to be hired. ($10.00 per hour / **$3,000** for a total of 300 hours).
- The SME within ICANN work group would review the existing PDF materials and recommend the relevant Videos (if available) and Podcast clips to be integrated into the pre-conversion materials. Testing in Aurasma for the Augmented Reality attributes. Some material in
  https://www.icann.org/resources/pages/beginners-guides-2012-03-06-en
  will be reviewed.
- Produce video animations with audio (music or voiceover) to communicate with drawing on a whiteboard and communicating a message to the audience using Sparkol.
- Use **SVG software** (open source) to develop 2D images and 3D Models for **Aurasma Studio** an augmented reality application.
- Upon completion of the integration of the resources the conversion of the resources into an Open Doc format to be configured for an e-Reader and Mobile platforms compatible with Augmented Reality features added.
- Testing of resources on various mobile platforms, e-Readers, Android Tablets, IPAD and Windows Surface to assess the navigation, appearance and functionality of enhanced multimedia augmented reality attributes added.
- New printed documents for testing requires having acceptable hardcopy version for testing, therefore **$335** are requested for printing services needed.

Technology Support: (telephone, Adobe Connect, web streaming, etc.)

Provide Adobe Connect for informal information sessions for the cross constituencies on the new tools. Various sessions will be scheduled for consultation with work group formed.

Language Services Support:

If the option to convert all guides / learning resources to the various UN Languages, this Service will be required for quality control.

Other:

Additional References on Augmented Reality (AR)

Augmented reality (AR) is a live, direct or indirect, view of a physical, real-world environment whose elements are augmented by computer-generated sensory input such as sound, video, graphics or GPS data. It is related to a more general concept called mediated reality, in which a view of reality is modified (possibly even diminished rather than augmented) by a computer. As a result, the technology functions by enhancing one's current perception of reality. By contrast, virtual reality replaces the real world with a simulated one. Augmentation is conventionally in real-time and in semantic context with environmental elements, such as sports scores on TV during a match. With the help of advanced AR technology (e.g. adding computer vision and object recognition) the information about the surrounding real world of the user becomes interactive and digitally manipulable. Artificial information about the environment and its objects can be overlaid on the real world.

Examples of Augmented Reality usage are listed below.
- Augmented Reality in Education: http://www.teachthought.com/uncategorized/augmented-reality-in-education-here-are-20-examples/
- Aurasma and Publishing: https://www.youtube.com/playlist?list=PLYk2ySKukLs4ciyrq0Z-kDbRBqniBVNwG
- Augment: https://manager.augmentedev.com/
- Augment – Getting Started Video: https://www.youtube.com/watch?v=K7WNfhsMhPs
- 5 top Virtual Reality & Augmented Reality trends for 2015: http://www.marxentlabs.com/top-virtual-reality-augmented-reality-trends-2015/
- Best Augmented Reality Apps: http://www.digitaltrends.com/android/best-augmented-reality-apps/
- 7 Ways Augmented Reality Will Improve Your Life: http://mashable.com/2012/12/19/augmented-reality-city/ - 3gRSaUqphsqN
- Augmented Reality in schools :: https://www.youtube.com/watch?v=ET4YJHJOB5M&index=3&list=PLYk2ySKukLs6Fih_6xze0EYRyGJguDYCF
- Realidad Aumentada para Dibujo Técnico: https://www.youtube.com/watch?v=hgjQAJBllnc&index=7&list=PLYk2ySKukLs6Fih_6xze0EYRyGJguDYCF
- HP + SCAD: Passport to Nature: https://www.youtube.com/watch?v=WRS_nZOOMyY&index=10&list=PLYk2ySKukLs6Fih_6xze0EYRyGJguDYCF

Travel Support:
Potential/planned Sponsorship Contribution: