10 Open Badge Challenges

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Introduction

Following an ORA call earlier this year, a number of challenges have been identified to achieve the goals of an Open Recognition Architecture, such as called for in the Bologna Open Recognition Declaration.

Ten of those challenges have been selected to be addressed by Open Badge community during ePIC 2017. They are:

1. Open Recognition Networks

2. Informal Recognition

3. Open Endorsement

4. Open Discovery

5. Advanced Visualisation

6. Social Capital Representation

7. Open Pathways

How to address the challenges?

If you are interested to contribute in addressing one of the challenges, you can

1. Contact the authors of this document by adding a comment or suggestion in this document (and link to a document of your own)
2. Propose to lead a discussion on a challenge (for that you can use ORA's etherpads and uberconference facilities)
3. Submit a contribution to ePIC using our conference management system (https://www.conftool.net/epic2017/). The contribution can be the organisation of a workshop or a presentation.

Ideally, the challenges should be explored before the conference, so we can make the best possible use of the time in Bologna (25-27 October)

The 10 Open Badge Challenges

1. Open Recognition Networks

Key challenge: how to make learners, individuals and citizens the builders of Open Recognition Networks?

Statement: Current recognition systems are structured around the individual. In contrast, Open Recognition Networks are structured around a shared community space and common context of goals and badges, where social understanding can develop and grow. Open Recognition Networks can be a place where badges and endorsements are created and understood. They can serve as an interface between a community and web services that serve that community.

Questions: How do people construct their identity in relation to others in a community? How can we build meaningful visual representations from Open Badges, Open Endorsements and other verifiable claims that are more meaningful because they exist in a community? How can these representations enable reflection and action? How do they contribute to one's identity construction? How do they facilitate the emergence of bottom-up recognition systems? What is the architecture of the web services that offer Open Recognition Network functionality?

Use cases:

- Community of practice: visualising the status of members (expert, apprentice, etc.)
- Reputation-based recruitment services
- Recognition of prior learning

Related challenges:

- Informal Recognition
- Open Endorsements
- Open Discovery
- Open services

- ○ Communication
- ○ Employment connections
- ○ Mapping
- ○ History/timeline
- ○ Statistics: density, rate of endorsements, growth in badges, etc.
- ○ Events

2. Informal Recognition

Key Challenge: How to make informal recognition visible and valuable?

Statement: Open Badges have been mainly successful in supporting the *formal* recognition of informal learning. They are not practical, in their current form, to support *informal recognition*.

Questions: What are the means required to extend the recognition of informal learning beyond *formal recognition* to include *informal recognition*? How can we provide everyone with the means to *recognise* others? How can we assess the reputation of the entity recognising another entity?

Use cases:

- Recognition of a peer / client / provider…
- Quick creation of an ad-hoc badgeclass to describe an achievement right at award time. (BadgeClass identified with urn:uuid IRI)

Related challenges:

- [Open Endorsements](#)
- [Open Recognition Networks](#)

3. Open Endorsement

Key Challenge: How to make endorsements easy to perform and valuable?

Statement: Open Badges are one specific form of *endorsement* (the endorsement of the *earner* by the *issuer* of a badge). There are other possible forms of endorsements that do not require a badge, like signing a document or a contract.

Questions: How can we extend the possibility of endorsement beyond that of Open Badges (classes and instances)? What are the means required to make endorsement an experience at least as easy as signing a paper document with a pen? How to make endorsement as easy as a "like" yet more valuable than LinkedIn ones?

Use cases:

- Endorse pieces of evidence used by a peer/colleague to get a badge
- Endorse a person/organisation using the URL of her Twitter/LinkedIn/blog account
- Endorse a badge class or badge instance

Related challenges:

- [Informal Recognition](#)
- [Open Recognition Networks](#)

4. Open Discovery

Key challenge: How to discover people, competencies, resources, service providers, etc. based on the data generated through Open Recognition while preserving the anonymity?

Statement: Search of talents is mainly confined within silos where participants are not in control of

their data. Open Discovery means that it is possible to expose one's data publicly and anonymously, independently from service providers, so that a variety of services, including services unknown to the data owner, can search the data to provide services.

Questions: how do we manage identifiers to facilitate discovery while maintaining anonymity and ensuring the authenticity of the issuer/earner identifier?

Use cases:

- Search for a profile based on a combination of attributes: Formulate a query; get number of matching targets; refine query then notify targets that they have been discovered; targets decide to respond or not, anonymously or not.
- Discovery of learning opportunities

Related challenges:

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5. Advanced Visualisation

Key challenge: How can we create meaningful visual representations of large collections of Badges?

Statement: As the number of badges and endorsements increase, traditional means of visualisation become difficult to manage or simply irrelevant.

Questions: How to add value to badges by displaying them in context?

Use cases:

- Use augmented reality to visualise badges in context — on people, products, services, buildings
- Display social networks around: individuals, competencies, ideas; values, locations, etc.
- Generate on the fly documents such as résumés (the Europass CV!) using innovative formats and providing a seamless navigation in its different dimensions (augmented reality?)

Related challenges:

- Social Capital Representation

6. Social Capital Representation

Key challenge: **how to provide individuals, communities and organisation with dynamic representations of the assets composing their social capital?**

Statement: the assets of a person is represented by the things they own and have produced, the trust they have endorsed and given. Open Badges and Open Endorsements are a means to provide a tangible representation of those assets that make it possible to provide some kind of tangible measurement of the social capital of person or a group.

Questions: how can we make the process of trust relationships elicitation, though badges, endorsements and other means visible and measurable? Can we provide a tangible and meaningful representation of social capital? How could a representation of social capital affect the growth of social capital?

Use cases:

- Equip individuals with "personal ledgers[1]" (not related to blockchains!) to collect and share

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[1] "Personal Ledger" doesn't imply that blockchains are needed...

data relative to their social capital
* Understand social capital within a common network

Related challenges:

* [Informal Recognition](#)
* [Open Recognition Networks](#)
* [Open Endorsements](#)
* [Advanced Visualisation](#)

7. Open Pathways

Key challenge: How can we elicit what is possible to do once a badge is acquired: new practice, new learning, new job, new activities, etc.?

Statement: when an Open Badge is delivered today, it contains evidence of what the person has achieved — in the past, to inform the future. How about providing badge earners with information that they could use immediately after receiving them: what are the next things I can do with what I have achieved with this badge? Read, practice, learn, contribute etc.

Questions: How can we make badges a springboard for future action initiated by the earner that is more than the next course to follow in the curriculum!)? If the badge is related to competencies, how can we connect those competencies to activities that are relevant to the badge earner?

Use cases:

* Suggest future courses based on content of the backpack
* List courses which the user should undertake in order to achieve their learning goal (visualise the badges that they need to acquire)

Related challenges:

* [Open Services](#)

8. Semantic value

Key challenge: How can we write criteria and alignment that contain semantic information, so they can be processed by computers at scale to provide meaningful information to humans?

Statement: Today, the *criteria* field in Open Badges is simple text and is created by the issuer. The semantic value is nil.

Questions: How can we connect Open Badges and Endorsements to existing frameworks and ontologies?

Use cases:

* When writing the criteria for a competency badge, the badge editor automatically make suggestions using online references to frameworks. The URIs of the definitions are then embedded into the badge that can be searched using URIs in addition to keywords.
* Read structured information from badges into target ePorfolios or wallets

Related challenges:

* [Open Services](#)

9. Open Services

Key challenge: How can we provide services (and access control to them) based on the

metadata contained in Open Badges and Open Endorsements?

Statement: Until now, the only service provided to Open Badge earners is the ability to display them on a page of a specialised software (Open Badge Passport, Badgr, Credly, Backpack, etc.). These services (verification, display of metadata) could be done using browser plugins, hence providing more flexibility to badge earners to manipulate their badges with existing services instead of specialised ones.

Questions: How can Open Badges trigger external services? How can we make sure that the access to services is independent from where badges are being stored?

Use cases:

- Career and HR Management
- Recruitment
- Learning Planning and Review
- Mapping talents
- Self-employment
- Résumé builder: submit a collection of badges and in return receive a CV (e.g. Europass CV). Add more badges to the collection and get an updated CV.

Related challenges:

- [Open Discovery](#)
- [Open Recognition Networks](#)

10. Interoperability

Key challenge: How can we ensure that badges (instances and classes) travel well across platforms and systems.

Statement: As badge issuing platforms become more sophisticated, they might also provide different features and services that could lock-in their users.

Questions: When a badge (class) is designed on one platform, how well does it travel to another platform that will be used to issue it? Is it important that badge classes travel well, or should we accept that different issuing platforms will provide different methods that can't be all defined in the Open Badges specifications? Can we discriminate between the services that could/should stay within an issuing/storage platform and those that should be externalised to third parties?

Use cases:

- Scenarios demonstrating how badges (instances and classes) travel well across platforms and systems.
- Export ESCObadges out of a Europass CV.
- Import any badge into Europass.
- Use blockchains to lessen reliance on HTTP-hosted verification systems and mediate the construction of identities that may be employed as issuer and recipient of Open Badges.
- Exchange of endorsement information

Related challenges:

- [Open Services](#)

Notes

Blockchains to improve Open Badges use of identifiers.

One of the shortcomings of the way we have addressed reputation is to look at it from an individualistic point of view: what is the reputation of that person in relation to other entities. But a reputation is also connected to the group the person belongs to / is excluded from. Edward Snowden lost his American passport, but the reasons why it was withdrawn make him someone of high reputation to a number of people (it's a "badge of honour") — and just the opposite to a number of other people!

By registering a public key within a community (or more than one) the registrant benefits from the community reputation. And conversely. So, when someone wants to access a service, i.e. comment a blog post or a YouTube movie, the host can check whether the identifier is connected or not to a group with a certain reputation. If the policy of a service is to disallow racist comments, and the person is connected to a racist group, the comment won't be published. On the other hand, if someone uses the reputation of a non-racist group as a means to grant comments rights, the group could be threatened to be blacklisted is the public key is still part of the community record.

This could be achieved using "micro-blockchains" created at local level, within a community to store the public keys of their members.:

- To have one's public key included in the blockchain, a person needs to be *co-opted* by a community manager and sign the record with her private key. The community might know who the real person is but nobody outside of the community does. The reputation of the group is granted to the new commer.

We then have blockchains of blockchains (eg. neighbourhood / district / city / regional / national; faculty / university / academic consortium; etc.). The reputation of an ID/public key is connected to the reputation of the group that has registered it (it is a form of endorsement).

- There are strong incentives for a community to police its membership as bad reputation has an effect on all the public keys stored by that group;
- The same public key can be stored in many different places, so if someone is excluded from a community for wrong reasons, she can join another group;
- To avoid the risk of having one's public key on a blockchain without consent (e.g. alt-right community), the record must be signed by the private key of the holder of the public key. Without such a signature, the meaning is that the identifier has been used without the consent of its owner.

References

http://etherpad.openrecognition.org/p/ORA2017-April-12

http://www.openrecognition.org/wp-content/uploads/2017/04/10-ePortfolio-challenges.pdf

http://www.openepic.eu

http://www.openrecognition.org