What is unusual about Coding da Vinci is the ten-week duration of the project. The rather long time span of the hackathon project should guarantee that cultural heritage institutions and programmers have sufficient time to collaborate in working with the digitised objects and if necessary improve data. Many German museums with rich, interesting collections took part in this year’s hackathon such as the Deutsches Museum München (German Museum Munich), the Stiftung Stadtmuseum Berlin (City Museum Foundation Berlin), the Ethnologisches Museum der Staatlichen Museen zu Berlin (Ethnological Museum of the Berlin State Museums), and the Niedersächsische Freilichtmuseum Cloppenburg (Open-air Museum Cloppenburg Lower Saxony). Altogether 20 cultural projects developed in the context of Coding da Vinci were sufficiently advanced after just ten weeks to be presented to the jury and the public. The broad spectrum of ideas as well as the scope of application of the different projects astonished the organisers of Coding da Vinci. The conceptual ideas derived from the project are all promising and it was especially interesting for the audience to learn what kind of challenges and needs triggered them. The aim of Coding da Vinci - presenting new ways of using and reusing digitized media and stimulating the exchange between and collaboration of cultural heritage institutions, the creative industries, and programmers - has been more than met. The final award ceremony - crowning conclusion of the hackathon - that took place at the Jüdisches Museum Berlin (Jewish Museum Berlin) offered not only a comprehensive overview of the ideas put forward by the participating cultural heritage institutions but also showed that a creative approach to the development of new strategies of use and reuse of digitized cultural content is promising and desirable for the GLAM sector. In com-


The second Kultur-Hackathon Coding da Vinci took place between April 25 and July 5, 2015 in Berlin. The Kultur-Hackathon Coding da Vinci is a joint project of the Deutsche Digitale Bibliothek (German Digital Library - www.deutsche-digitale-bibliothek.de), the Open Knowledge Foundation Germany (http://okfn.de), the Servicestelle Digitalisierung Berlin (Service Centre Digitization Berlin - www.servicestelle-digitalisierung.de) and Wikimedia Germany (https://wikimedia.de). The success of the hackathon, however, depends largely upon the collaboration of cultural heritage institutions. During this year’s hackathon, 33 institutions from the GLAM sector made accessible 47 datasets containing several thousand digitised objects. In preparation for the hackathon, cultural heritage institutions put a lot of effort into the production of digital images and the collating of metadata information. For detailed information about the conference, the projects, and the conditions of participation, see http://codingdavinci.de/. Providing access to the digitized media is but a small part of the task; project partners also had to clarify the image rights and adapt metadata information to the standards of the Coding da Vinci project.
parison to 2014, this year’s projects were conceptually and technically more advanced and polished. Detailed descriptions and presentations of all the projects as well as links to all codings facilitated via github can be accessed on the official website of Coding da Vinci [http://codingdavinci.de/projekte/](http://codingdavinci.de/projekte/)

The development of digitisation strategies for (uncommon) analogue media was one of the key topics of Coding da Vinci. The digitisation of piano scrolls held at the Deutsches Museum München (German Museum Munich) was an impressive example of how challenging this undertaking can be for cultural heritage institutions. Another focus of the hackathon was the linking of authority files and object data of different cultural heritage institutions and visualizing this information with the help of an online map. Especially with regard to this topic, it became obvious again that a standardized metadata format for GLAM institutions is important. The constraint to one type of controlled vocabulary does not necessarily present an advantage to cultural heritage institutions. In many cases, a single type of controlled vocabulary does not fulfil all the requirements GLAM institutions pose; it may happen that a highly specialised vocabulary is needed to describe objects from cultural heritage collections. Rather, it is of central importance that the vocabulary used for a scientific and thorough description of objects is based on authority files that are 1) online, 2) freely accessible, and 3) clearly identifiable. Only in this way will it be possible to get access to and make use of the richness of cultural content held by GLAM institutions. Otherwise usability of digitised cultural content could become (unintentionally) limited. Restriction and reduction of information as well as the formation of groups and facets should only be performed when it comes to the applications of special museum communication tools, because these gadgets impose different needs on the digitised museum content. It cannot be beneficial to scientific object documentation if information is generalised by cultural institutions from the very beginning of the digitisation process.

Winners of the 2015 Coding da Vinci hackathon are the following projects: “Rolling Stone”, “Floradex”, “Midiola”, “Kurbelkamera”, and “Nürnberger Lebkuchen”.

The project participants’ favourite material to get creative with was the metadata information related to the piano scrolls of the Deutsches Museum in Munich (German Museum Munich). Altogether four projects – “Klangvisualisierung”, “Little Piano”, “MIDIOLA”, and “Pianola” – used the historic piano scrolls for their pilot tools and services.

The patent drawings “Regesta Impirii” housed at the Landesarchiv Baden-Württemberg (State Archive Baden-Württemberg) were also very attractive to the hackathon participants and resulted in interesting applications. The collection “Regesta Impirii” comprises photographs and herbaria from libraries, archives, museums, academies, and media centres in Baden-Württemberg. The organisers of Coding da Vinci have high hopes that these first very promising results will be further developed by
cultural institutions and programmers in the future and lead to broadly applicable end products.

Summing up the German open cultural data hackathon: Coding da Vinci is all about uncovering the creative possibilities of freely-accessible digitised cultural data and pointing out new perspectives for GLAM institutions in promoting cultural heritage and opening up to new target audiences. Unfortunately, at this time there is no finalisation phase foreseen for the period after the hackathon. However, many of the projects would need further support in order to bring forward market-ready products and services. As this year's hackathon has proven, many interesting project ideas have been developed that would not only be successful as a mobile app or a tool for dissemination but also as useful instruments for museum documentation.

For the time being Coding da Vinci is only utilising data that are freely accessible according to the rights statements CC-BY, CC-BY-SA, CC0 and Public Domain (see http://codingdavinci.de/daten/). Data sets that are labelled NC (non-commercial) are up to the present excluded from the hackathon, which hinders the development of the full creative potential of Coding da Vinci. Due to this demand for open-access data, the amount of digitised cultural content usable in the context of the hackathon is fairly limited at the moment. Clarifying rights status of images and metadata can be very time-consuming on the one hand; on the other hand interested persons can be charged a fee when wanting to use the digitised media commercially.

To solve these problems and fill the “black holes”, it will be necessary to respond to the justified claims of the rights holders as well as to support the attempts of cultural heritage institutions in having their digital collections disseminated as widely and effectively as possible. For special projects such as Coding da Vinci, cultural heritage institutions and rights holders would have to enter into a dialogue with each other in order to make accessible protected digital media or digital images of protected cultural heritage objects. These negotiations are again costly in terms of time and money, and especially for projects with a short life span, protracted debates are not feasible. What is more, special regulations can be prone to incorrect decisions, misunderstandings, and conflicts. That is why a more general and explicit legal status in terms of free accessibility of cultural heritage material would be desirable for all parties.

The organisers of Coding da Vinci are also aware of this problem and want to revise the concept of the hackathon. Consequently, the event will not take place in 2016. This gap year will be used to develop new strategies, ideas, and approaches for Coding da Vinci so that the “Kultur-Hackathon Coding da Vinci” will be back in 2017 (http://codingdavinci.de/).

It is to be hoped that these ambitious concepts can be put into practice and that in 2017 even more cultural heritage institutions can join forces with programmers and the creative industry in order to make use of an even larger amount of digital cultural content.

It would be a great loss if such an innovative project as Coding da Vinci would not be able to unleash its full potential because of unduly rigid rights restrictions.

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