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Beyond Translation: Translating VRA Core 4.0 into Chinese

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Abstract

Developed in 1996, the VRA (Visual Resources Association) Core, now in its fourth version, is an internationally recognized metadata standard for describing works of visual culture and their surrogates. It has been integrated into schemes and tools to record cultural objects and related media files for decades. The primary document, *VRA Core 4.0 Element Description and Tagging Examples* (*VRA Element Description*), was first made available in English, followed by Italian and Greek. To expand its global influence, VRA has long sought to have its metadata standard translated into additional languages, including Chinese. Starting in early 2021, members of the VRA Cataloging and Metadata Standards Committee worked with a team of metadata practitioners to translate this document, inviting scholars and practitioners in the U.S., Taiwan, and mainland China to review translation drafts. Following an 18-month effort, *VRA Element Description* became available on the Library of Congress website (https://www.loc.gov/standards/vracore/schemas.html) on August 15, 2022 in both traditional and simplified Chinese. This article explores the origin and trajectory of the project and delves into the challenges encountered by the core team and reviewers at various phases. Key discussion points include the difference between the two language systems (traditional and simplified Chinese), the processes for selecting Chinese terms that share similar connotations with the original English terms, the role of reviewers in refining the drafts, and the unexpected difficulties in formatting the final versions.

Keywords

Visual resources, data standards, metadata, metadata schema element translation, traditional Chinese, simplified Chinese, VRA Core 4.0.

Author Bio & Acknowledgements

Xiaoli Ma is the Metadata Librarian and the Head of Metadata Unit at the George A. Smathers Libraries, University of Florida.

Introduction

Developed in 1996, the VRA (Visual Resources Association) Core, now in its fourth version, is an internationally recognized metadata standard for describing works of visual culture and their surrogates. It has been integrated into schemes and tools to record cultural objects and related media files for decades. The primary document, *VRA Core 4.0 Element Description and Tagging Examples* (*VRA Element Description*), was first made available in English, followed by Italian and Greek. To expand its global influence, VRA has long sought to have its metadata standard translated into additional languages, including Chinese. Starting in early 2021, members of the VRA Cataloging and Metadata Standards Committee worked with a team of metadata practitioners to translate this document, inviting scholars and practitioners in the U.S., Taiwan, and mainland China to review translation drafts. Following an 18-month effort, *VRA Element Description* became available on the Library of Congress website (https://www.loc.gov/standards/vracore/schemas.html) on August 15, 2022 in both traditional and simplified Chinese. This article shares how the project took shape and came to completion. It's a tale of teamwork and synergy.

How Did It Start?

I have studied and applied VRA Core in my work since the early stages of my career. In 2014, when the VRA Element Description's Italian version became available, Margaret Webster, who led the VRA and the VRA Foundation for years, casually mentioned the project of translating *VRA Element Description* to Chinese to me, my immediate thought was, "That sounds impossible!" A few years later, when I worked as the Metadata Specialist at Artstor, the head of the Interface Design Team assigned me the task of translating VRA Core elements into Chinese, so that Artstor could roll out the Chinese User Interface. He provided me with a scholarly paper published in traditional Chinese on VRA Core in which some element names had been translated. I still didn't feel I could deliver the translation. It was not until several years later when a translation team of metadata practitioners was formed that this translation project finally took off.

The Team

"That sounds impossible!" Why? I am confident in both my Chinese and English language skills. I also have a few years of professional translation training and practice under my belt. The challenges derive from the nature of VRA Core. It is a metadata schema: highly abstract and conceptual, but at the same time designed to be used to describe cultural objects and their surrogates in museums, art studios, galleries, archives, and other cultural heritage institutions. How can I choose the Chinese terms that share the same denotations of the English ones while also properly reflecting the connotation in English? Additionally, these terms need to be common and easily comprehensible to Chinese speakers so that the VRA Core can be adapted to the Chinese environment as needed. Moreover, how could the terms of a standard be decided by *a single person*? Translation can be considered a secondhand creation, but to translate a metadata schema is not to "create" a new schema; rather, it is to pass the original to a different language as completely and accurately as possible so that the strength of the schema is not lost in translation. Lastly, I only speak and write in simplified Chinese, but many potential users speak and write in traditional Chinese. If we were going to translate the schema, it should ultimately serve both groups.

Traditional Chinese (also known as "complex characters") has, as the name indicates, the same structure as the style of characters that appeared during the late Qin Dynasty and the Han Dynasty (206 B.C.E. – 220 C.E.).[1] It is in use in present day Hong Kong, Taiwan, and Macau.

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[1] Wei Bi, "The Origin and Evolvement of Chinese Characters," *Gdańskie Studia Azji Wschodniej*, November 19, 2014, https://doi.org/https://core.ac.uk/works/67323819.

Simplified Chinese was introduced in Mainland China in the 1950s to improve literacy rates and is now used in mainland China, Malaysia, and Singapore. This system simplifies character structures and as a result, largely reduces the total number of strokes. Additionally, in order to provide further simplification, it eliminates variants of the same characters. However, many characters were left untouched so that they appear identical in both traditional and simplified Chinese. For example, the 13 strokes that form the character representing festivals in traditional Chinese ("節") have been simplified to 5 strokes ("节") in simplified Chinese; however, in both systems, the two characters representing "culture" are the same ("文化"). While a few characters look identical, the vast majority appear different, making it hard (if not impossible) for users of one system to understand the writing of the other. This explains why a separate version for each system was needed for the VRA Core's translation. Moreover, the differences between traditional and simplified Chinese go beyond the visual. Since they are used in different areas, naturally *how* they are used also differs; the same concept can be expressed in totally different words and phrases. For instance, traditional Chinese expresses the term "digital" as "數位", whereas simplified Chinese uses "数码". Beyond this, the conventions and punctuation are also different across the two systems. Therefore, in order to produce high-quality translations, we needed to call upon the expertise of native users of both systems.

I reached out to four metadata professionals to form a team that could cover the bases of native speakers of both traditional and simplified Chinese, as well as including non-native Chinese speakers who showed great enthusiasm for bridging best practices between English and Chinese communities. I have included a biographical sketch of each team member here (expanded translation team biographies included in Appendix A).

Jane Pan, Metadata and Quality Control Coordinator for Digital Services, George A. Smathers Libraries at the University of Florida, has been working as a metadata practitioner for over 30 years in Taiwan as well as the U.S. She is passionate about using her language skills to make more Chinese heritage objects discoverable. She has been exposed to many metadata schemes and reviewed numerous digital records that describe cultural heritage objects. She speaks and writes natively in traditional Chinese.

Sai Deng, Metadata Librarian at the University of Central Florida, has participated in many metadata schema projects, including the metadata standards produced by the Sunshine State Digital Network and the Chinese American Librarians Association Resource & Repository System. She also has extensive experience translating English books written by Westerners who traveled to or researched mainland China in the nineteenth and twentieth centuries and introducing them to both scholars and the public in mainland China. Deng speaks and writes natively in simplified Chinese.

Ching-Jung Chen, Associate Professor/Digital Scholarship Librarian at the City College Library in New York, has led many digital projects using Shared Shelf (now JSTOR Forum). JSTOR Forum was originally designed as a system to catalog cultural objects and their surrogates. It provided an environment where users could integrate a variety of metadata schemas, including the VRA Core. Chen is an expert user who has applied the VRA Core in JSTOR Forum. Moreover, Chen is also an Art History researcher; she understands what is necessary both from a metadata practitioner perspective and a scholar's view. She speaks and writes natively in traditional Chinese.

Like Chen, I (Xiaoli Ma) have applied the VRA Core in JSTOR Forum first as a user and then as the Metadata Specialist at Artstor to further develop JSTOR Forum so that it could meet the needs of VRA Core users. Prior to that experience, I also worked in IRIS (Image Resource Information System), a FileMaker Pro database created by visual resource professionals for

cataloging art images (its main schema is based in the VRA Core). Vcat is another FileMaker Pro database tool that serves a similar purpose for the visual resources community. As the Metadata Specialist at Artstor, I thoroughly reviewed the VRA XMLs exported from Vcat for transforming VRA Core data to be ingested into Shared Shelf. All the above have provided me with a very good grip on the VRA Core. On the language side, I majored in English as an undergraduate at Sichuan University in mainland China, translating materials between the two languages as part of my coursework. I later worked part-time translating book catalogs from English to Chinese for two years. Like Sai, I speak and write natively in simplified Chinese.

K. Sarah Ostrach, currently Art & Architecture Librarian at Rice University, approached me when the team was forming. As a new member of the VRA Cataloging and Metadata Committee, she wanted to contribute to the translation project. A native English speaker, she studied Chinese and Chinese art history and lived and worked in Beijing for over two years. She later worked at the National Gallery of Art, processing a collection of photographs of artwork from the National Palace Museum in Taipei. With the addition of Ostrach, the team was ready. This dynamic team offered a solid combination of language expertise as well as metadata experience.

Phases

Starting at the end of 2020 and ending in summer 2022, this 18-month project progressed through five phases:

- Initial translation
- Translation modification
- Review
- Further modification
- Preparation for publication

I prepared the initial translation for the simplified Chinese version, and Pan worked on the initial traditional version; it took us over a month to finish the initial drafts. At this stage, we tried very hard to keep the two versions in sync – that is, to express the same concept using Chinese consistently and forming paragraph structures the same way. We hoped this consistency could make later efforts easier; additionally, if the same concepts could be expressed the same way, this could facilitate standardization in both simplified and traditional Chinese environments and therefore ease the burden of communication between these two language systems. However, as the team moved to modify the initial drafts while respecting the differences of the two language systems, the team shifted away from syncing the two versions. Instead, the team focused on improving the *accuracy* and *completeness* of the translation as well as the language flow.

During the translation modification phase, each team member reviewed the initial translation independently. The team then went through everyone's comments and made decisions together about key concepts and difficult sentences. After that, the team was divided into two groups based on the language system to improve the flow of the language, then reassembled as one team to discuss further issues and make decisions. We prepared and organized discussions using a Google Sheet where everyone could review the terms and sentences in question and provide comments before meetings. While this method proved very effective due to scheduling conflicts, family issues, and other uncontrollable factors, the modification process still took about 10 months, the lengthiest part of the entire process.

The final review process started in late February and ended in May 2022. During this phase, the team invited metadata practitioners and scholars in the U.S. as well as Taiwan and mainland

China to review the translation draft. Based on comments gathered from reviewers, the team produced new drafts for community feedback. In August, the team finished final edits as well as formatting for publication. On August 15, the Chinese versions were finally made available on the Library of Congress website.

Reviewers

To further improve the quality of the translation, the team solicited feedback from reviewers with diverse backgrounds. The original group of reviewers included Charlene Chou, Head of Knowledge Access at New York University Library, Marcia Zeng at Kent State University, Carol Ng-He at Center for the Art of East Asia, University of Chicago, and Shu-Wen Lin at San Francisco Museum of Modern Art (reviewer biographies included in Appendix A).

As the review progressed, Zeng suggested we also seek feedback from scholars in Taiwan and mainland China since they use Chinese in their daily work. She kindly helped identify Wei Fan from Sichuan University in mainland China, and Sophy Shu-Jiun Chen from the Institute of History and Philology Academia Sinica in Taiwan. They are both known scholars in the cultural heritage community whose research areas cover the VRA Core, thus expanding our reviewer group.

All reviewers gave us incredibly constructive feedback. They commented on the use of languages and pointed out mistakes and gaps. They also provided us with good suggestions and support as needed. For instance, Zeng advised us to supply reviewers outside the U.S. with a sample record created in both simplified and traditional Chinese that also included English as a way to demonstrate one possible use case of the Chinese translation. This effort helped bridge the differences in practices between the U.S. and the other areas of the world. Along the same lines, Fan shared similar metadata standards used in mainland China. By reviewing these documents, we were able to assess whether we had selected the right expressions. Fan also suggested adding a comparison chart where the key concepts are listed side-by-side in traditional Chinese, simplified Chinese, and English. This chart provides users with a quick overview of the selected terms in Chinese and the choice discrepancy between traditional and simplified Chinese (an excellent idea!). Without Fan, the team may have not seen the need for this chart.

Challenges
Key Concepts

Element names chosen for schema are usually required to be both specific and generic at the same time. They should be specific enough to declare the broad concept they intend to cover. At the same time, they should be generic because the schema could be used for a variety of content, so the term cannot be discipline- or context-specific. When translating these terms, the team needed to choose terms sharing the same status – *specific but generic*. This was a major challenge the team encountered during both the translation and the translation modification phase. For instance, the term "Agent" clearly states that it covers the people, whether individuals or a group of people (organizations), who contribute to the lifecycle of the works and/or their surrogates. Dublin Core uses two elements, "Creator" and "Contributor," to cover similar concepts. The team brainstormed quite a few terms like "代理/代理", "贡献者/貢獻者", and "主导者/主導者". Each of these terms have different connotations. Most of them narrow down the role of people described by this element only to one particular type of role: "代理/代理" (representatives); "贡献者/貢獻者" (contributors); "主导者/主導者" (movers, leaders, shakers). None of them can truly convey the connotation of the original "Agent" that encompasses all types of roles. Ultimately, the team decided upon a new candidate – "责任者/責任者" – that is broad enough to include people who participated in the many

tasks related to the lifecycle of the creative works. "责任者/責任者" means people who are responsible but does not specify the tasks they are responsible for. This term works perfectly with the sub-element "Role" that serves to define the responsible area for each "Agent."

Another challenge is that the same concepts can be expressed totally differently in simplified and traditional Chinese. When this scenario was encountered, the team brainstormed and researched to help decide which words or phrases to use. This was challenging because all team members had worked in the U.S. for a long period of time and had since lost familiarity with how these concepts are discussed in Chinese professional settings. This is where the reviewers' feedback helped cover the gap, as when Sophy Shu-Jiun Chen informed us that the term "metadata" was used differently by traditional and simplified Chinese users, but scholars, regardless of which language system they usually use, understand both. In this case, it was up to the translation team to decide whether to use the same term for both versions or different ones. The team ended up choosing one for each version: "後設資料" for the traditional version, and "元数据" for the simplified version, thus following the conversion of each system.

Another example in which the team followed the convention of language usage was translating "Subject Headings" in "Library of Congress Subject Headings" and "Sears Subject Headings." Multiple reviewers pointed out that the original translation the team used – "主题表" – was not wrong but was inconsistent with how "Subject Headings" was usually used in Chinese, that is "标题表". When "标题表" is used outside of the library world, it could refer to a list of titles, while "主题表" means subjects, topics, or main themes, depending on the context. The team didn't know how and why "标题表" became the standard adapted and used over many years, but decided to follow the custom.

Formatting

While the team struggled with language differences, issues around formatting were totally unexpected. These issues were mainly caused by switching between different input software and word processors. The team tried its best to resolve them and was thankful that reviewers and members who quickly identified these issues were willing to dedicate their time tackling these sticky situations.

When reviewing the drafts, Shu-Wen Lin pointed out many formatting issues, e.g., spacing and the use of punctuation in the traditional Chinese version. She diligently fixed quite a few inconsistencies when reviewing the traditional draft. After the final drafts were ready, the team assigned the formatting task to Ostrach, who explored layouts and tools that could be used. In the end, the team decided to keep it simple: use Google Docs as the main environment and ensure most, if not all, of the texts displayed correctly.

The translation documents used English and Chinese in both versions because the team preferred to show the English key elements and listed standards together with their Chinese translation, keeping the original English examples as they are. Producing documents such as this requires switching between English and Chinese input software from time to time and can be challenging because the spacing for English input and Chinese input software is different. Moreover, the spacing and punctuation between simplified and traditional Chinese vary. Even in the same language system, different input software can produce slightly different spacing. Originally, the team planned to move Google Docs drafts to Microsoft Word desktop for formatting but ultimately decided against it, noticing that transferring between Google Docs and Microsoft Word desktop produced display issues, such as words overlaying each other. The team had not anticipated the discrepancies between input software and different word processors. Of all the things the team

could have done differently, it would have been helpful if, in the early stages of the translation project, the team had set aside time to identify the tools that could facilitate the formatting and layout design of documents that involve multiple languages.

Conclusion

The Chinese translation of the VRA Core 4.0 Element Description is a product of synergy. When we put our heads together, we produced a translation that was less biased, less eccentric, and less erroneous. On top of that, our team was lucky to have the support and guidance of reviewers who helped improve upon the quality of the initial translation, bringing it to a more proficient level. Moreover, I would like to thank the VRA Cataloging and Metadata Standards Committee for trusting me to organize this project, as well as Tracy Meehleib at the Library of Congress who posted the translation in such a timely manner so that we could share this translation worldwide.

Appendix A: Translation Project Participant Biographies

Translation Team
Ching-Jung Chen

Ching-Jung Chen is the Digital Scholarship Librarian at the City College of New York. She received her Ph.D. from Rutgers University, where she wrote her dissertation on the English conversation piece. She has published and presented on British art, Atayal textiles, art librarianship, digital collections, and open educational resources.

Sai Deng

Sai Deng is the Metadata Librarian and Associate Librarian at the University of Central Florida (UCF). She received her M.L.S. from the Graduate School of Library and Information Science at the University of Illinois at Urbana-Champaign (UIUC). She worked for the Preserving Electronic Publications and Illinois Government Documents Initiative as a research assistant at UIUC. She was the Metadata Catalog Librarian at Wichita State University Libraries from 2005 to 2012. Prior to coming to the U.S., she was an editor for Commercial Press International and a newsletter editor for Sanlian Joint Publishing in Beijing, China.

Sai has been working with metadata for over a decade and served on many American Library Association (ALA) committees and interest groups such as ALA Core/ALCTS Cataloging and Classification Research, Metadata, and Cataloging Norms. She has also served on the ALA Core Subject Analysis Committee (SAC), Subcommittee on Faceted Vocabularies (SSFV), the Digital Library Federation (DLF) Committee for Equity and Inclusion GLAM Diversity subgroup, and the Wikidata:WikiProject Chinese Culture and Heritage Group. In addition, she served on the Sunshine State Digital Network Metadata Working Group and the Ph.D. Exam and Dissertation Committee in the Texts & Technology program at UCF.

Sai's scholarly interests are focused on digital libraries, metadata, linked open data, knowledge organization, data documentation and curation, and Chinese studies. She has published papers in peer-reviewed journals including the *Journal of Library Metadata*, *Cataloging and Classification Quarterly, New Library World, Technical Services Quarterly*, *OCLC Systems & Services*, and *International Information & Library Review*. Her translated or edited books include: "洋记者的广州城记" Chinese translation of *Sketches of China: with Illustrations from Original Drawings by W. W. (William Wightman) Wood, 1830*; "广州七天" Chinese translation of *Walks in The City of Canton by John Henry Gray, 1875*; and "中国研究外文旧籍汇刊·中国记录" *Chinese Studies in the West: The Chinese Record, Volume 10, 11, 12*.

Jane Pen

Jane Pen is the Metadata and Quality Control Coordinator for Digital Services in the George A. Smathers Libraries at the University of Florida. She received her B.A. in Library Science from Tamkang University in Taipei, Taiwan and her A.S. in computer information at Santa Fe College. She has a wealth of library experience in all aspects of library services as she was previously employed by Tsing-Hua University Library in Taiwan, Follett Library Resources in Illinois, and Alachua County Library System in Gainesville, Florida. At Digital Services, Jane oversees quality control for digitization projects. She ensures the quality and completeness of the digital products meet technical guidelines and creates structural metadata for all digital images in order to make them accessible via the University of Florida Digital Collections. She also provides support for specialized projects and workflows.

Xiaoli Ma

Xiaoli Ma is the Metadata Librarian and the Head of Metadata Unit at the George A. Smathers Libraries, University of Florida where she develops metadata guidelines and implements workflows to enhance the usability and searchability of the content held by large-scale digital libraries. Currently, she explores the use of AI technology to automate the subject-indexing process. She studied Information Science, Art History, and American Literature at the University of Michigan, the University of South Florida, and Sichuan University in mainland China. Previously, she worked at Artstor as Metadata Specialist – Technical Lead, where she collaborated with developers and interface designers to create tools to collect, migrate, and update metadata.

K. Sarah Ostrach

K. Sarah Ostrach is currently the Art and Architecture Librarian at Rice University. Before this role, she was the Digital Asset Librarian for the Hoover Institution Library & Archives and the 2020-21 Kress Fellow in Art Librarianship at Yale University. While completing her M.L.I.S. degree, she worked as a student technician in the National Gallery of Art's Department of Image Collections where she indexed and cataloged over 500 Chinese artists and rearranged a collection of over 1000 photographs. While her present focus is public services and instruction, she has a keen interest in metadata cataloging standards and how these standards impact search and discovery.

Reviewers
Charlene Chou

Charlene Chou is Head of the Knowledge Access Department at the New York University Libraries where she manages cataloging and metadata services. In addition to serving on the PCC Policy Committee, RDA Steering Committee, Share VDE Sapientia Entity Identification Working Group, OCLC RLP Metadata Managers Focus Group, and CEAL E-resources Metadata TF, she has committed to do pilot projects, teaching, and research on linked data, multilingual resources, digital scholarship, and inclusive metadata.

Shu-Jiun Chen

Shu-Jiun Chen is the Assistant Research Fellow at the Institute of Taiwan History, Academia Sinica and the Executive Secretary of the Academia Sinica Digital Center. She received her M.A. in Information Studies from the Department of Information Studies at the University of Sheffield, U.K. in 1997, and her Ph.D. in Library and Information Science at the National Taiwan University in 2012. Chen is also an Adjunct Assistant Professor of the Graduate Institute of Library & Information Studies, National Taiwan Normal University. Her research interests include digital libraries, metadata, knowledge organization, and digital humanities. She initiated the Research Project of Chinese Language AAT (Art & Architecture Thesaurus) with the Getty Research Institute in 2008 and is the External Advisor of Getty Vocabularies as LOD (Linked Open Data) since 2014.

Wei Fan

Wei Fan is the Associate Professor at Sichuan University. He received his Ph.D. in Library and Information Science from the Graduate School of Chinese Academy of Sciences. Fan is also the Director of the Department of Information Management Technology at Sichuan University. His research interests are metadata, knowledge organization systems, and semantic web application. He focuses on domain modeling and linked data application in the culture heritage field. He has published more than 20 academic papers (mainly in Chinese) on Library Reference Model (LRM), Linked Data, and controlled vocabularies. He is a member of the Information Organization Committee of China Library Association, the Youth Committee of China Index Society, the Youth

Editorial Committee of Journal of Library and Information Service, and the UDC Advisory Committee.

Carol Ng-He

Carol Ng-He is the Digital Collections Curator at the Center for the Art of East Asia in the Department of Art History at the University of Chicago. She has presented and published on topics of art and archaeology museum education, visual literacy, and art librarianship. Ng-He earned her Master of Arts in Art Education from the School of the Art Institute of Chicago and her Master of Library of Information Science from San José State University.

Shu-Wen Lin

Shu-Wen Lin has served as the Associate Media Conservator at the San Francisco Museum of Modern Art since 2022. She received her MA from the Moving Image Archiving and Preservation program at New York University in 2016. Prior to and following NYU, she gained experience while working at a number of institutions, including the Art Gallery of Ontario, the Taipei Fine Arts Museum, the Smithsonian American Art Museum, National Library of Medicine (NIH), M+ Museum for Visual Culture, MoMA (New York), the Stanford University Libraries, the New York Public Library, Sterling Ruby Studio, Cai Guo-Qiang Studio, and Hallwalls Contemporary Art Center.

Marcia Lei Zeng

Marcia Lei Zeng is a Professor of Information Science at Kent State University. She holds a Ph.D. from the School of Computing and Information at the University of Pittsburgh. Her research interests include knowledge organization systems (taxonomies, thesauri, ontologies, etc.), Linked Data, metadata, smart data and big data, semantic technologies, and digital humanities. Zeng has authored over 100 research papers as well as six books. Her research projects have received funding from the National Science Foundation (NSF), the Institute of Museum and Library Services (IMLS), OCLC, Fulbright, and other esteemed academic and scientific foundations. She has chaired and served on committees, working groups, and executive boards for the International Federation of Library Associations and Institutions (IFLA), the Special Libraries Association (SLA), the Association for Information Science and Technology (ASIS&T), the U.S. National Information Standards Organization (NISO), the International Organization for Standardization (ISO), the Dublin Core Metadata Initiative (DCMI), the International Society for Knowledge Organization (ISKO), and the World Wide Web Consortium (W3C). She was a U.S. Senior Fulbright Scholar at Academia Sinica Taiwan in 2016 for a digital humanities research project, and just served as the chair of the Digital Humanities Curriculum Committee of the global iSchools organization. Currently, she is serving as a member of the DCMI Governing Board and the ISKO Board of Directors.