

Preface

In 2006, TIME magazine published a picture of a computer on its cover as the “Person of the Year” with the words:

You. Yes, you. You control the Information Age. Welcome to your world.

The magazine’s selection highlights the profound shift in the way that the World Wide Web has advanced to allow an increasing number of everyday people to not only access information, but also contribute and participate in their own right. This trend has been popularised as “Web 2.0” or “the social media revolution”—Jenkins (2006) coined the term, “participatory culture”, heralding a new era of “open government”. The perhaps utopian prospect of a democratisation of knowledge through the ability for everyone to become a creator, publisher, remixer, recommender, sharer, and referrer has led to an exponential growth in content: Every 60 s on Facebook, 510,000 comments are posted, 293,000 statuses are updated, and 136,000 photographs are uploaded (thesocialskinny.com). However, quantity of content does not imply quality and thus, with more sources of content, spread via more digital media channels, to more people, Web users started to face the problem of information overload.

Large corporations in the digital economy such as Facebook, Google, Twitter, and Amazon have deployed sophisticated filters and recommendation systems designed to help us navigate the otherwise bloated social mediascape. The content displayed on Facebook’s newsfeed is selected based on a user’s profile, their location, interests, habits, and online transactions—what they post, share, recommend, and “like”. The popularity of social media stems from its power to create personalised spaces and walled gardens, which are tailored to individual preferences and favour content relevant to each user. Algorithms proprietary to each social media site determine what is deemed relevant: with the absence of a journalistic or editorial code of ethics, these machine learning algorithms determine the make-up of the Facebook newsfeed, Google’s top search results, and the recommendations on whom to follow on Twitter and what to buy on Amazon. They are optimised to prioritise content that will generate more traffic and more profit.

Lotan (2014) warns that “We’re not seeing different viewpoints, but rather more of the same. A healthy democracy is contingent on having a healthy media ecosystem. As builders of these online networked spaces, how do we make sure we are optimizing not only for traffic and engagement, but also an informed public? ... The underlying algorithmics powering this recommendation engine help reinforce our values and bake more of the same voices into our information streams”.

The compounding aspects of this polarisation of opinions in social media have been studied in political science and media and communication studies, e.g. *echo chambers* (Aiello et al. 2012), *filter bubbles* (Pariser 2011), and *voice* (Couldry 2010).

With the Internet spilling over into the built environment, there is an opportune moment. With this book, we collectively call for claiming back the citizen’s right to the digital city. The chapters in this book offer a variety of analyses of the unique and largely untapped qualities of the digital city that we want the community of scholars interested in urban interaction design and urban informatics to explore further with us, such as their ability to reach a diversity of citizens, and the—thus far—absence of automated personalisation algorithms. They also offer complementary urban interfaces and civic media channels that may enable non-users of conventional social media to participate in different ways. Can city spaces help us burst the filter bubbles, break out of the echo chambers, and give us a voice?

The citizen’s right to the digital city recognises the wealth of knowledge, wisdom, and experiences collectively and privately held by each urbanite. Similar to how Bannon (1992) at the time called for a profound shift in attention “from human factors to human actors” in systems development, more and more commentators these days critique the established hegemony of the engineering and technology-centric epistemology embedded in any one proprietary smart city vision. With this book, we want to contribute to the debate that has started to consider alternative approaches focussing on “smart citizens” and their not just vital, but crucial participation in the city making enterprise (Foth et al. 2011; Townsend 2013; de Waal 2014; Hemment and Townsend 2014; Brynskov et al. 2014).

People have advanced from consumers to co-producers, from stationary office workers to mobile urban nomads, and from passive members of the plebs to active instigators of change. Yet, interaction designers often still refer to them only as “users”, and architects and urban planners often still refer only as “city residents” or “building occupants”. There is more to it. There is a need to focus on the “life between the systems,” with a reference to Danish architect Jan Gehl’s pivotal book “Life between buildings” (1971/1987). With this volume, we continue the Digital Cities series expanding its repertoire looking at urban interfaces, citizen action, and participatory city making. We trust that the contributions to this book will continue the series that has been seminal in tracing and informing key historic developments at the intersection of digital media and the built environment, from the information superhighway to the smart city.

Started in 1999, the Digital Cities series is the longest running academic workshop series that has rigorously followed the intertwined development of cities and digital technologies. Previous years have seen papers presented at Digital Cities to appear as the basis of key anthologies that we list below. The works presented at the Digital Cities workshop series have also been formative to a diverse set of emerging fields, e.g. urban informatics, smart cities, pervasive computing, Internet of things, media architecture, urban interaction design, and—most recently—urban science (Townsend 2015).

Apart from the Digital Cities series' inclusive nature towards interdisciplinary discussions and debate, the fact that the resulting publications have helped articulate and position issues within this heterogeneous domain is a crucial reason for the longevity and continuity of the Digital Cities biennial gathering. The present edited volume of peer-reviewed chapters is a result of contributions by selected authors that presented at Digital Cities 7 (in conjunction with the 5th Communities & Technologies conference 2011 in Brisbane) and Digital Cities 8 (in conjunction with the 6th Communities & Technologies conference 2013 in Munich), as well as invited colleagues.

We look forward to not only continuing the discussion, but also through our collective work to contributing to betterment of the urban condition, that is, the human condition.

Brisbane, Australia
Aarhus, Denmark
Oulu, Finland

Marcus Foth
Martin Brynskov
Timo Ojala

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Digital Cities Series

Previous Digital Cities workshops have produced high quality peer-reviewed publications containing selected workshop papers and other invited contributions:

Digital Cities 6 (C&T 2009, PennState)

Foth, M., Forlano, L., Satchell, C., & Gibbs, M. (Eds.) (2011). *From Social Butterfly to Engaged Citizen: Urban Informatics, Social Media, Ubiquitous Computing, and Mobile Technology to Support Citizen Engagement*. Cambridge, MA: MIT Press.

Digital Cities 5 (C&T 2007, Michigan)

Foth, M. (Ed.) (2009). *Handbook of Research on Urban Informatics: The Practice and Promise of the Real-Time City*. Hershey, PA: Information Science Reference, IGI Global.

Digital Cities 4 (C&T 2005, Milan)

Aurigi, A., & De Cindio, F. (Eds.) (2008). *Augmented Urban Spaces: Articulating the Physical and Electronic City*. Aldershot, UK: Ashgate.

Digital Cities 3 (C&T 2003, Amsterdam)

Van den Besselaar, P., & Koizumi, S. (Eds.) (2005). *Digital Cities 3: Information Technologies for Social Capital* (Lecture Notes in Computer Science No. 3081). Heidelberg, Germany: Springer.

Digital Cities 2 (Kyoto 2001)

Tanabe, M., van den Besselaar, P., & Ishida, T. (Eds.) (2002). *Digital Cities 2: Computational and Sociological Approaches* (Lecture Notes in Computer Science No. 2362). Heidelberg, Germany: Springer.

Digital Cities 1 (Kyoto 1999)

Ishida, T., & Isbister, K. (Eds.). (2000). *Digital Cities: Technologies, Experiences, and Future Perspectives* (Lecture Notes in Computer Science No. 1765). Heidelberg, Germany: Springer.



<http://www.springer.com/978-981-287-917-2>

Citizen's Right to the Digital City

Urban Interfaces, Activism, and Placemaking

Foth, M.; Brynskov, M.; Ojala, T. (Eds.)

2015, XXVII, 259 p. 60 illus., 16 illus. in color., Hardcover

ISBN: 978-981-287-917-2