



# MOBILE PHONE DATA AND OFFICIAL STATISTICS

4TH INTERNATIONAL CONFERENCE ON BIG DATA 8-10 NOV 2017 BOGOTA, COLOMBIA

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EUROSTAT

**Julieth Solano**  
DANE, Colombia

**Juan David Olarte**  
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**Jose Luis Fajardo**  
CLARO, Colombia

**Margus Tiru**  
POSITIUM, Estonia

**Dan Bogdanov**  
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# Panel Sheet

Use cases for Data, Services and Applications

Thu Nov 9<sup>th</sup> 2017. 16:15-17:45 (90min). MOBILE PHONE DATA AND OFFICIAL STATISTICS

This session gives an overview of data generated by mobile communication technologies and choices, which clarifies the trade-offs between size, complexity and usefulness. The session will discuss the importance to understand stakeholders and partnership models for mobile data projects and the logical order of steps in the process of data extraction. It will also discuss how to calculate tourism statistics and how to identify tourism indicators, calibration and inference.

Moderator: Mr. Margus Tiru, Positium

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## Panel members

Mr. Fernando Reis, Eurostat

Ms. Julieth Solano, DANE, Colombia

Mr. Juan David Olarte, MINTIC, Colombia

Mr. Jose Luis Fajardo, CLARO, Colombia

Mr. Margus Tiru, Positium, Estonia

Mr. Dan Bogdanov, Cybernetica, Estonia

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## Presentations

1. EUROSTAT, Mr. Fernando Reis – “The role of legal basis in the partnerships with MNOs”
  2. DANE, Ms. Julieth Solano – “Exploratory analysis on the contribution of mobile data to the collection phase of the upcoming Population and Housing census”
  3. MINTIC, Mr. Juan David Olarte – “ICT STATISTICS: The search for new data sources”
  4. CLARO, Mr. Jose Luis Fajardo – “Experience of sharing information between public and private sectors” (“Experiencia de compartir información entre sectores público y privado”)
  5. POSITIUM/CYBERNETICA, Mr. Margus Tiru and Mr. Dan Bogdanov “Mobile Big Data Processing Without Compromising Privacy”
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## Schedule

**Moderator will signal you when you have 5/2 minutes left. Please watch your time – respect other panellists and presenters! Moderator will have to stop the presentation, if it goes overtime.**

Start	End	Time (min)	Topic
16:15	16:20	5	Margus Tiru – introduction of the session and the panel members
16:20	16:32	12	EUROSTAT, Mr. Fernando Reis – “The role of legal basis in the partnerships with MNOs”
16:32	16:44	12	DANE, Ms. Julieth Solano – “Exploratory analysis on the contribution of mobile data to the collection phase of the upcoming Population and Housing census”
16:44	16:56	12	MINTIC, Mr. Juan David Olarte – “ICT STATISTICS: The search for new data sources”

16:56	17:08	12	CLARO, Mr. Jose Luis Fajardo – “Experience of sharing information between public and private sectors” (“Experiencia de compartir información entre sectores público y privado”)
17:08	17:20	12	POSITIUM/CYBERNETICA, Mr. Margus Tiru and Mr. Dan Bogdanov – “Mobile Big Data Processing Without Compromising Privacy”
17:20	17:30	10	Moderator questions to panel members (2 questions, fast answers to/from all)
17:30	17:40	10	Questions from the audience
17:40	17:45	5	Closing remarks by moderator

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## BIOs

**Mr. Fernando Reis.** Member of Eurostat big data task-force in charge of developing a strategy for the integration of big data in official statistics at EU level. Fernando is involved in the discussion of strategic issues concerning big data and statistical production, including methodology, quality, skills, ethics, communication, legislation, big data policy and IT infrastructure. He oversees pilot experiments on the use of big data sources for official statistics and conducts some studies himself, namely involving mobile phone data and web activity data.

**Ms. Julieth Solano.** Innovation Coordinator in DANE. Professional in Economics and international business and magister in economy from the National University of Colombia. As innovation coordinator she actively participates in the implementation of DANE’s Smart Data strategy to explore the relevance and contribution of non-traditional sources to the production and dissemination of official statistics.

**Mr. Juan David Olarte.** Head of Planning and Sectoral Studies at Ministry of ICT of Colombia. Juan is an Economist with a Political Science degree from Universidad de los Andes, specializing in Development Projects. He has been a financial analyst for a consulting enterprise, adviser to the Director of the DANE, Head of the ICT Fund Office of the MINTIC, and currently serves as Head of the Planning and Sectoral Studies of Ministry of ICT. His work experience has allowed him to consolidate knowledge in different areas such as planning, budgeting, knowledge management, evaluation, project management and execution, regional management and resource management.

**Mr. José Luis Fajardo Pabon.** Information Management Manager of Claro Colombia. He has Systems Engineering and Business Administration degrees, and he is a Certified Big Data Professional. As a manager, he is responsible for the implementation of Business Intelligence and Analytics solutions for the use and governance of the data and company information using technological innovation tools.

**Mr. Margus Tiru.** I am a former CEO and current Chief Data Officer in Positium. I am a geographer by education – a GIS specialist. The work with data from mobile network operators started for me in already in 2005. Currently, as CDO, I am responsible for developing the methodology for processing mobile big data into variety of statistical indicators used in domains like transportation planning, population statistics, tourism statistics, urban planning, spatial marketing, and several other domains. I am also a coordinator of the ITU big data project on ICT statistics, which I will be mentioned in this panel several times.

**Mr. Dan Bogdanov** met his first significant privacy challenges while working with the data collection systems of the Estonian Genome Foundation. Since then he has been inspired to researching cryptographic solutions for privacy problems. He is the inventor of Sharemind, a secure multi-party computation system for collecting, sharing and processing private data. Sharemind has been used in data protection systems in various applications processing tax, education, genomic and financial data. Dr Bogdanov has been a research team lead for multiple privacy technology research projects with the United States DARPA, European FP7 and Horizon 2020. He is the co-author of the the architecture of privacy-preserving systems and secret sharing ISO standards. Today, Dan leads the Department of Privacy Technologies at Cybernetica, an Estonian company creating information security, e-Governance and maritime security solutions.

## Opening remarks:

Dear guests,

Our session is titled MOBILE PHONE DATA AND OFFICIAL STATISTICS.

This session focuses on the data generated by mobile network operators and reflects the experience gained in the projects involving private and public partnerships, cooperation on national and international level, data access possibilities, tools and applications for official statistics.

We have a good cross-section of panellists including a data provider, a national statistics institute, ministry of ICT, international statistics organisation and private companies.

My hope today for this panel is to analyse some of the possibilities of cooperation between stakeholders from different background, to celebrate the fruits of successful projects, and to look into the future with open eyes, and optimistic spirit.

For audience, I hope there is much valuable information you can absorb from our panellists, and that this discussion will continue even after the session. And not only because we have very limited time and this is the last session today.

As a little technical sidemark, I kindly ask the audience to keep the questions until the end of the presentations.

With no further comments, I would like to introduce today's panellists.

**Mr. Fernando Reis from Eurostat**

**Ms. Julieth Solano from DANE Colombia**

**Mr. Juan David Olarte from MINTIC Colombia**

**Mr. José Luis Fajardo Pabon from Claro Colombia**

**Dr. Dan Bogdanov from Cybernetica Estonia**

## Closing remarks:

Trust

I would like to thank MINTIC for organising such a good event. Seems like this conference is getting more and more traction and we see useful and practical projects throughout the world. I can see a clear shift from theoretical to practical experiences and more enthusiastic faces when talking about mobile big data, but other big data sources as well.

Muchas Gracias!