

Minutes of RainGain Workshop

Prepared by Rosa Vicari

Date: Monday 8th September 2014

Venue: École des Ponts ParisTech (FR)

Purpose of the meeting:

Scientific seminar, updates on the progress of the project and the French radar installation, visit of the C-band radar in Trappes operated by Météo-France.

Present:

Name		Organisation
Ugo BOESSO	(UB)	EPTB Seine Grands Lacs/ Direction de l'hydrologie et de la Bassée (FR)
Philippe BOMPART	(PB)	Conseil Général du Val-de-Marne (FR)
Thierry BRAUN	(TB)	Conseil Général de la Seine-Saint-Denis (FR)
Massimiano BUCCHI	(MB)	Università di Trento (IT)
Ali FADEL	(AF)	Lebanese CNRS
Alexandra FINOTTI	(AF)	UFSC (BZ)
George FITTON	(GF)	École des Ponts ParisTech (FR)
Violette GALLET	(VG)	CEPRI (FR)
Agathe GIANGOLA-MURZYN	(AGM)	Ecole des Ponts Paris Tech (FR)
Miguel GILLON	(MTV)	Conseil Général du Val-de-Marne (FR)
Auguste GIRES	(AG)	Ecole des Ponts Paris Tech (FR)
Jean-Noël GUERRE	(JG)	Advancity (FR)
Alain KAPFER	(AK)	RHEA (FR)
Dong In LEE	(DIL)	Pukyong National University (KR)
Jisun LEE	(JL)	Pukyong National University (KR)
Bruno LEMAIRE	(BL)	Ecole des Ponts Paris Tech (FR)
Masayuki MAKI	(MM)	Kagoshima University (JP)
Yacine MEZEMATE	(YM)	Ecole des Ponts Paris Tech (FR)
Laurent MONIER	(LM)	VEOLIA (FR)



Name		Organisation
Françoise PRETEUX	(FP)	École des Ponts ParisTech (FR)
Julien RICHARD	(JR)	Ecole des Ponts Paris Tech (FR)
Mohamed SAAD	(MS)	Ecole des Ponts Paris Tech (FR)
Daniel SCHERTZER	(DS)	Ecole des Ponts Paris Tech (FR)
Ioulia TCHIGUIRINSKAIA	(IT)	Ecole des Ponts Paris Tech (FR)
Marie-Claire TEN VELDHUIS	(MV)	Delft University of Technology (NL)
Daniel THEVENOT	(DT)	Ecole des Ponts Paris Tech (FR)
Thomas THOUVENOT	(TT)	VEOLIA (FR)
Pierre-Antoine VERSINI	(PV)	Ecole des Ponts Paris Tech (FR)
Rosa VICARI	(RV)	École des Ponts ParisTech (FR)
Bernard WILLINGER	(BW)	VEOLIA (FR)

Apologies:

Name		Organisation
Jean-Luc CHEZE		Météo France (FR)
Pierre TABARY		Météo France (FR)
Marie-Genevieve RENAUDIN		Météo France (FR)
David GOUTX		Météo-France (FR)
Julien DESPLAT		Météo-France (FR)
Fabien MASSON		Météo France (FR)
Christophe ZOBRIST		Veolia (FR)
Nalatalja STANCIC		Conseil général de Seine-Saint-Denis (FR)



MINUTES

1) Scientific workshop:

Welcome and introduction by FP (Head of Research at ENPC).

MB explained how digital media and the crisis of traditional mediators (e.g. science journalists, science museums) are pushing research organisations to become highly influential opinion makers in science and technology outreach towards the general public. The research centre OBSERVA launched a project aimed to establish indicators on the quality of science communication. Indeed the large accessibility of Web communications (for the users as well as for the producers) raises questions on if and how the quality of science and technology outreach should be ensured.

MM gave an overview of X-band radar history in Japan where this technology was used for rainfall observation since 1990. He explained how the reliability of X-bands radar radically improved thanks to polarimetric technology. MM presented RainX, a Japanese network of 35 X-band radars, and TOMACS, a project aimed at reducing damages due to weather extremes in the Tokyo Metropolitan Area. The project entails three pillars: to understand extreme weather mechanisms, to improve detection and prediction in collaboration with end users, and to implement new solutions through social experiments.

Dong-In Lee introduced the WISE project: an eight years project to improve meteorology information service, develop applied model, provide decision support to reduce disaster impact, provide information for national agenda, build a platform for customize services. The WISE project aims to serve the public in real time operations as well as to benefit scientific and technological sectors.

DL continued his presentation with an overview of his work on *Orographic precipitation observation in Jeju Island (Korea)* and on *Analysis of long-term fluctuation of air pollutant (PM₁₀) with selection of the priority control monitoring site by network theory*.

2) Update on the RainGain project and the installation of the French radar

MTV made a brief introduction on the RainGain project for the newcomers in the French observers group. In particular, she pointed out that one of the project aims is to fill the gap between scientific research and operational needs and she illustrated the last advancements in the purchase of the Dutch radar.

DS summarized various steps that were followed by ENPC to purchase and install the French radar, design the radar supporting structure, and raise awareness on the project: a lot of work was done to obtain the necessary authorisations and to gather full support



from the organisations located in Cité Descartes Campus. At the moment, the radar production has been finalised (the factory acceptance test were fulfilled) and the construction of the radar structure is expected to start at the beginning of October.

DS answered to several questions about: the expected volume and costs for data storage (40 tera per year with a cost of 240.000 euros); the difficulties that involves installing a radar in urban areas (for the same reason in the framework of the CASA project (US) X-band radars were installed only in non-urban areas); the advantages of the future radar location (Bienvenüe building, in front of ENPC).

DS explained how radar attenuation problems (during a storm) can be reduced through the use of C-band radar data (which are less affected by storm attenuation) or future installation of a network of X-band radars. In this respect, an interesting case is the TOMACS project that operates multiple X-band and C-band radars in addition to other devices in the Tokyo metropolitan area.

IT emphasis out that some difficulties are specific of the ENPC radar case, but there has been a learning process that will be very useful for future installation of X-band radars in the Île-de-France Region.

VG asked how the link is established between researchers and Local Authorities. DS replied that Local Authorities are involved in the project as partners (CG94 and CG93) or observers. The NOG is an important starting point for future collaborations and RainGain partners want to enlarge the number of observers, especially given that the radar will very shortly be installed. While the current project is focused on getting the equipment, a new project is needed for full implementation and creation of services.

Following the comments of TT and JG on the importance to look for business opportunities, IT pointed out that Interreg requires free distribution of data and that the objective of RainGain is to test and compare different radar technologies. Nevertheless, a business model for X-band radar is the aim of a new proposal presented by Veolia, ENPC and TU Delft (named RAINBOW2) and the next Interreg call will be about developing business opportunities.

The French observers group decided meet again for the radar inauguration at Cité Descartes Campus.

The meeting ended with a visit of the C-band radar in Trappes, operated by Météo-France.