

Asia Pacific Workshop on Time and Frequency 2017 (ATF2017)

CSIR-National Physical Laboratory, New Delhi, India

November 25, 2017

Welcome (09:30-9:40)

Dr. D. K. Aswal, CSIR- National Physical Laboratory, India

Session 1. National Time Scale and Services

Chair : Dr. D. K. Aswal, CSIR- National Physical Laboratory, India

- 9:40-10:05 **Evaluation of NPLI-CsF1 and development of NPLI-CsF2**
P. Arora⁽¹⁾, A. Acharya⁽¹⁾, V. Bharath⁽¹⁾, S. Yadav⁽¹⁾, A. Agarwal⁽¹⁾, V. N. Ojha⁽¹⁾ and A. Sen Gupta⁽²⁾, (1) Time and Frequency Dept., CSIR- National Physical Laboratory, India, (2) The North Cap University, India
- 10:05-10:30 **Upgradation and Strengthening of National Time Scale of India**
A. Agarwal⁽¹⁾, P. Thorat⁽¹⁾, M. P. Olaniya⁽¹⁾, S. Yadav⁽¹⁾, P. Kandpal⁽¹⁾, P. Arora⁽¹⁾, S. Panja⁽¹⁾, S. De⁽¹⁾, T. Bharadwaj⁽¹⁾, N. Sharma⁽²⁾, S. Kazim⁽¹⁾, B. Ehtesham⁽¹⁾, V. N. Ojha⁽¹⁾ and D. K. Aswal⁽¹⁾, (1) Time & Frequency Metrology, CSIR-National Physical Laboratory, India, (2) Knowledge Resource Center, CSIR-National Physical Laboratory, India.
- 10:30-10:55 **Status Report on the Research Activities at NIS on Time Interval Measurement**
G. Gomah, National Institute for Standards, Egypt

Coffee Break (10:55-11:10)

- 11:10-11:35 **Dissemination of time using Network Time Protocol and its application**
R. C. Jha⁽¹⁾, A. Shukla⁽¹⁾, A. Agarwal⁽¹⁾, P. Thorat⁽¹⁾, T. Bharadwaj⁽¹⁾, N. Sharma⁽²⁾, and V. N. Ojha⁽¹⁾, (1) Time & Frequency Metrology, CSIR-National Physical Laboratory, India, (2) Knowledge Resource Center, CSIR-National Physical Laboratory, India.
- 11:35-12:00 **Accuracy evaluation of Fonoclock telephone time service at NPLI**
P. Arora⁽¹⁾, S. Yadav⁽¹⁾, A. Acharya⁽¹⁾, C. P. Bhaskar⁽¹⁾, V. N. Ojha⁽¹⁾ and A. Sen Gupta⁽²⁾, (1) Time and Frequency Dept., CSIR- National Physical Laboratory, India, (2) The North Cap University, India

Lunch Break (12:00-13:30)

Session 2. Optical Frequency Standard

Chair : Dr. D. Yu, Korea Research Institute of Standards and Science

- 13:30-13:55 **Progress of Ytterbium-ion Optical Frequency Standard in India**
S. De^{(1), (2)}, N. Batra^{(1), (2)}, A. Roy^{(1), (2)}, L. Sharma^{(1), (2)}, K. Sharma⁽¹⁾, S. Panja^{(1), (2)} and V.N. Ojha^{(1), (2)}, (1) CSIR- National Physical Laboratory, India, (2) Academy of Scientific and Innovative Research, CSIR, India
- 13:55-14:20 **Current status of the Yb optical lattice clock in KRISS**
M. Heo, H. Kim, C. Park, W. Lee and D. Yu, Korea Research Institute of Standards and Science, Korea
- 14:20-14:45 **Time scale steered by an optical clock**
T. Ido, H. Hachisu, F. Nakagawa, and Y. Hanado, National Institute of Information and Communications Technology, Japan

Coffee Break (14:45-15:00)

Session 3. Time and Frequency Transfer

Chair : Dr. C. Liao, TL, Chunghwa Telecom Co., Taiwan

- 15:00-15:25 **Report of the GPS calibration trip among NIMT, NMIM, and VMI in 2017**
Y. Huang, T. Chiu, H. Lin and C. Liao, Telecommunication Laboratories, Chunghwa Telecom Co., Ltd., Taiwan
- 15:25-15:50 **Brief report of site visit to RCM-LIPI by expert on GNSS time-transfer and calibration techniques**
R. Ichikawa and H. Narita, National Institute of Information and Communications Technology, Japan
- 15:50-16:15 **An evaluation of low-cost GNSS receivers for GPSCV time-transfer**
M. J. Wouters and E. L. Marais, National Measurement Institute, Australia
- 16:15-16:40 **Development of a new TWSTFT modem at NICT**
M. Fujieda, T. Gotoh, R. Tabuchi, M. Aida, and Y. Hanado, National Institute of Information and Communications Technology, Japan
- 16:40-17:05 **Dynamic Two Way Time Transfer (DTWTT)**
K. G. Dangi and A. Sen Gupta, The NorthCap University, India

Closing Remarks

Dr. V. N. Ojha, CSIR- National Physical Laboratory, India