

Hannoversche Beiträge zur Nachrichtentechnik

Band 0.1

Special issue
edited by

Niccimon - Competence Center of Lower Saxony
for Information Systems for Mobile Usage

**1st Workshop on Positioning, Navigation
and Communication 2004
WPNC '04**

**Information Technology Laboratory
University of Hannover, Hannover, Germany
March, 26th 2004**

Shaker Verlag
Aachen 2004

Bibliographic information published by Die Deutsche Bibliothek

Die Deutsche Bibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data is available in the internet at <http://dnb.ddb.de>.

Copyright Shaker Verlag 2004

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the publishers.

Printed in Germany.

ISBN 3-8322-2553-6

ISSN 1616-5489

Shaker Verlag GmbH • P.O. BOX 101818 • D-52018 Aachen

Phone: 0049/2407/9596-0 • Telefax: 0049/2407/9596-9

Internet: www.shaker.de • eMail: info@shaker.de



Abstract WPNC'04 Proceedings

ISBN: 3-8322-2553-6

User position information has become a first-class network object, since it enables many new kinds of services. Location is a fundamental and unifying principle that humans use to organize their "mental maps" of the world. Besides, it has tremendous utility due to its central role in how humans organize and relate to their physical and conceptual worlds. As an information-based society, we do value systems and services that can tell us about the location of people, objects, and phenomena. Our existing information systems do reflect this, as most of the contents in databases relate or are linked somehow to location or geographic components.

The Proceedings of the First Workshop on Positioning, Navigation and Communication (WPNC'04) cover about 30 quality contributions from 9 countries in 3 continents that have been presented at the University of Hannover, Germany, on the 26.03.2004. The content covers the following broad spectrum of topics from both, a theoretical and a practical point of view:

- Positioning and navigation systems for indoor, outdoor and underwater
 - o for applications like museum guidance, car, bicycle and pedestrian navigation, enterprise usage, production automatisisation, etc.
 - o using technologies like Ultra-Wideband, Bluetooth, Wireless LAN, Infrared, GSM, GPS, Radar, etc.
 - o in different environments like mobile ad-hoc networks, local and global systems, sensor networks, etc.
- Platforms for location based services
- Issues of routing, broadcasting and position prediction
- Channel constraints and analysis
- Reliability of location based networks

The workshop was organized by Niccimon, the Competence Centre of Lower Saxony for Information Systems for Mobile Usage, which has been jointly established by the Institute for Communications Technology (IfN) at Braunschweig Technical University, the Information Technology Laboratory (IfI) at Hannover University, and the Institute for Computer Science (OFFIS) at Oldenburg University.

The success of this workshop has given good motivation to establish it as a regular, yearly event.