

California PRC



ERDC - CRREL



VTT/VTI



ERDC - WES



FDOT



USA

- FAA
- FHWA
- USACE – ERDC (CRREL and WES)
- Caltrans/UC PRC
- Florida DOT APR&I
- Gas Technology Institute
- Illinois
- Indiana DOT
- Kansas DOT
- Louisiana TRC
- MnRoad
- NCAT
- Ohio DOT
- Penn State
- Texas DOT
- Virginia Smart Road

TRB APT Forum

- APT Workshop Session 1995
- Task Force A2B52 1996
- Committee A2B09 2001
- Scope
- Activities
- Membership

A2B09 Efforts

- NCHRP Synthesis 32-04 : Significant Findings of FS/APT
- 2nd Int’nl APT Conf. Minneapolis, Mn 2004
- Home page :
<http://www.ksu.edu/pavements/trb/A2B09/index.htm>
- Research Needs Statements
 - Effect of Environment/Time on APT Results
 - Pavement Instrumentation of FS/APT Facilities
 - National FS/APT Database

A2B52 Efforts

- APT Survey
- Transportation Research Circular E-C 004
 - ‘Interim Report on Accelerated Pavement Testing (APT) Data Survey’
- 1st Int’nl Conference Reno, Nv 1999
 - www.t2.unr.edu/conference/index.html
- TRB Millennium Paper
 - ‘Full-Scale/Accelerated Pavement Testing: Current Status and Future Directions’
- NCHRP 10-56 APT : Data Guidelines

Current Studies

- NCHRP Project 20-5, Topic 32-04
'Significant Findings from
Full-Scale/Accelerated Pavement Tests'
- Drs. Fred Hugo and Amy Epps
- <http://www.sun.ac.za>
- Environmental effects on NCHRP funded
list (NCHRP Upcoming Project 10-66)

Some APT Collaboration efforts

- Westrack
- FHWA/CRREL (Denmark, Finland, MnRoad)
- MnRoad (Ill, Oh, CRREL)
- SPTC (Ca, Mn, Tx, Wa)
 - pavements.ce.washington.edu/sptc
- CRREL – Subgrade study - 17 states PF
- Midwest Pooled Fund (Ia, Ks, Mo, Ne)
- NCAT – 9 states, FHWA
- IPRF – non-profit (ACPA, PCA, NRMCA)
- California PRC (Ca, Ill, Wa, Me, CRREL, RSA, Wien)

EU COST 347 Forum

- Established 2000 - runs until 2004
- Scope
- Membership

Main objective

To develop a European code of good practice to optimise the use of Accelerated Load Testing facilities and improve the application of results from these facilities

Organisation

- ALT inventory
- Previous and current research
- ALT versus RLT
- Common code of good practice
- Future use of ALT
- Dissemination

EU COST 347 Efforts

- Documents
 - WP reports
 - Final report
 - Common code of good practice for the use of ALT
 - Future topics for ALT research
- Seminars
 - Papers, articles
- International relations

ALT MATTERS
Issue 3 – Special Conference Edition: BCRA, Lisbon and ICAP, Copenhagen

In this Issue:
Welcome to this Conference edition
COST Action 347 Feature
Working Group 1 reviews the use of ALT facilities
ALT in Europe
New technology helps the old: ALT helps to develop guidelines for testing and use of traditional materials
Laboratory-scale ALT device helps to improve Finnish roads
A programme is set up to monitor the use of ALT in placement and maintenance.
ALT helps to produce economic pavements for developing countries using indigenous volcanic ash as a pozzolan binder for stabilised base

Events this Summer
BCRA
ICAP workshop on ALT
Find out more
www.pave-test.org
is a portal to the web sites of the COST Action 347 in Europe and the A2B09 Committee of the TRB in the USA. It also has pointers to most of the web sites offered by establishments with ALT/APT facilities.
If you know of a useful web site that is not mentioned, please contact
Andrew.Dawson@nottingham.ac.uk

ALT Editorial
by Chairman Gregers Hildebrand, Danish Road Directorate, Danish Road Institute
We cannot be sure of the weather, but this summer at the two major international conferences in the pavement calendar, BCRA in Lisbon and ICAP in Copenhagen, Accelerated Load Testing (ALT) will be a hot topic. ALT will be playing a major role at both conferences with dedicated workshops in addition to the many conference papers that rely on ALT to prove their point.
To demonstrate the versatility and range of ALT uses in Europe, this special issue of ALT Matters deals with a selection of novel topics. Traditional pavement construction using stone sets, that has evolved from the time of the pyramids, has been improved using ALT; ALT enables African natural volcanic ash to be confidently used in road construction, and it has helped to design road treatments and its placement in the context of testing within a laboratory-scale ALT facility as well as instrumentation, are all featured in this special edition.
Going to a professional conference is often synonymous with a tight schedule to get to hear as much as possible and to talk to as many colleagues as possible. Both BCRA and ICAP provide many opportunities to meet people and to hear a number of high-quality presentations of very interesting topics. It is often a lot for yourself to sit in at a presentation which may not deal with your favourite topic, just for the outside chance that this is the place where you get that single new idea, which made the trip worthwhile. Obviously, I hope that the new idea will involve ALT!
Finally, an invitation to all readers: At the ICAP in Copenhagen, COST 347 in co-operation with the US Transportation Research Board Committee A2B09 on Full Scale/Accelerated Pavement Testing have arranged a workshop on ALT. We hope to see you there for an exciting afternoon full of ALT discussion. Please see the announcement box at the end of the newsletter for details.

Contact: Chairman of COST 347: Gregers Hildebrand - ghh@rdi.dk
Editor of ALT MATTERS: Mike Nunn - munn@tri.co.uk

Instrumentation for ALT
Andrew Dawson, University of Nottingham, UK
(Member of Working Group 1 of COST 347)
Accelerated load testing of pavements is practised to observe the performance of pavements and, usually, this observation isn't limited to what we can see on the surface. Although the rutting and cracking seen on the surface is important, engineers want to know why these distresses have occurred, and answers to questions such as - *What layer of the pavement is causing distress? How will modifications to the soil affect performance?* and, *What is the relationship between behaviour of this material in the road and in the laboratory?*
These questions, and many more, can only be answered if we know what is happening inside the pavement. We may be able to guess from observation of the pavement surface but, to be sure, we need to observe within the pavement. To help us do this there are a wide range of instruments, which can be built into the road or installed after construction. There are instruments for stress, strain, deflection, temperature, moisture and suction and they are available in a variety of forms that are suitable for installation in asphalt, concrete, aggregates, soils and secondary materials.
One of the activities of Working Group 1 (WG1) of COST 347 has been to collect the experience of instrumentation by ALT operators. The final report is available via the web-site (www.pave-test.org) by going to the inventory report on instrumentation on the database page. WG1 has undertaken a diverse scientific approach across the 15 respondents to its survey.

www.pave-test.org

Benefits from COST 347

- Harmonisation of European efforts within the field
- Improved methods for pavement design
- Transfer of knowledge within Europe
- Improved co-operation with parallel international activities

Europe

- Circular

- ETHZ (CH)
- LCPC (F)
- LIRA (ROM)
- KSD (SK)

- Pulse loading

- BASt (D)
- TU Dresden (D)

- Linear

- LAVOC (CH)
- RTM (DK)
- CEDEX (E)
- Oulu (FIN)
- LINTRACK (NL)
- HVS-Nordic (FIN/S)
- TRL (UK)
- U Nottingham - PTF (UK)
- U Nottingham - HLF (UK)

Research topics

	1981	1984	1987	1990	1993	1996	1999	2002	Total
Materials	1	1	1	6	5	10	10	8	42
Performance	1		2	4	2	2	2	4	17
Design	1	1	3	5	7	7	9	9	42
Maintenance				2	2	2	3	1	10
Wheel loads	1		1	3	4	2	6	5	22
Validation	1			2	2	4	5	3	17
Climate	1							1	2
Others				1		1	1	1	4
Total	6	2	7	23	22	28	36	32	156

New Developments

- ICAP – Copenhagen, Aug. 02
 - APT Workshop
 - Collaboration
 - Users group (Pave-Test)
 - APT Sessions
- US User Group Meeting?
- APT/LTPP co-operative efforts?