

TITLE	PAGE
ISCP News	1-2
Industry Resources	2-3
Conference News	3-4
Call for Abstracts	4-5
Recent Abstract	5
Upcoming Events	6

ORGANIZATIONAL MEMBERS & MAJOR EVENT SPONSORS:

ISCP NEWS



ISCP Secretary-Treasurer Named MSU Department Chair

The Michigan State University (MSU) Department of Civil and Environmental Engineering recently announced that ISCP Secretary-Treasurer Dr. Neeraj Buch will be the new Department Chairperson, effective August 1, 2012. Dr. Buch, who has been the Interim Chair since July 2011, is a charter member of ISCP and has been an MSU faculty member since 1996.

ISCP congratulates Dr. Buch on his new position and wishes him good luck!

10th International Conference on Concrete Pavements: A Big Success!



The 10th International Conference on Concrete Pavements (10th ICCP) was held July 8-12 at the Fairmont Château Frontenac in Québec, Québec, Canada. More than 300 delegates, sponsors, exhibitors and guests participated in the event, including representatives from at least 24 countries and 6 continents.

The Conference included more than 80 peer-reviewed technical papers, 12 workshop sessions, a student poster board competition, and 4 field trip/site visit options. All of the conference papers, poster board displays, and available presentations and workshop materials will soon be available (pending presenter permissions) to conference delegates on an official conference CD or by download. Non-delegates will be able to purchase copies from the 10th ICCP website in a few weeks by going to: www.concretepavements.org/10thiccp.

The highlight of the conference was the Gala Reception and Awards Banquet, at which the following award winners were announced:

B. Frank McCullough Award for Best Student Poster Board:
Armen Amirkhonian (University of Illinois)
"Disk-Shaped Compact Tension Test for Concrete"

Bengt Friberg Award for Best Paper by a Younger Author:
Amanda Bordelon (University of Utah) and
Jeffery Roesler (University of Illinois)
"Distribution of Fiber Reinforcement in Thin Concrete Overlays"

Eldon Yoder Award for Best Paper of the Conference:
Robert Otto Rasmussen (The Transtec Group)
Richard Soheny (The Transtec Group)
Gary J. Fick (Trinity Construction Management) and
E. Thomas Cackler (National Center for Concrete Pavement Technology)
"How to Design and Construct Quieter Concrete Pavements"

Congratulations to all of the award-winners!

ISCP extends sincere thanks to all of the conference delegates, authors, workshop presenters, organizers, members of the steering committee, sponsors and collaborators, and others for their help and support in making the 10th ICCP a success!

We look forward to working with everyone again when we begin planning the 11th ICCP for 2016!

(You will soon be able to view additional photos at: www.concretepavements.org/10thiccp.)





INDUSTRY RESOURCES/RESEARCH REPORTS

Worldwide Situation of Road Pricing & Assessment of Its Impacts

The 246-page report of the PIARC Technical Committee "Road System Economics and Social Development" presents the state of road pricing schemes with corresponding developments and an assessment of their impacts. The panorama of pricing schemes are presented in an appendix and are implemented or under study in the following twenty-two (22) countries: Austria, Canada, Czech Rep., Denmark, Finland, France, Germany, Hungary, Italy, Japan, Mexico, Morocco, Netherlands, New Zealand, Norway, UK, USA, Singapore, Slovak Rep., Spain, Sweden, and Switzerland.

For each case, the report presents the objectives, pricing scheme, results (success and difficulties) and prospects. Road pricing is increasingly seen as a reaction to the dual challenge of reduced budgetary revenues and increased congestion. The scope is expanded beyond the traditional taxes on fuels. Tolling remains widespread; vignette systems tend to decline with the emergence of pricing based on the distance traveled. If congestion charging in urban areas tends to grow, implementation of national systems of mobility pricing still faces many challenges including that of obtaining public support.

The impact of different pricing methods are examined from fifteen case studies presented on these topics:

- characteristics of mobility
- road safety
- social equity
- the environment
- the economy
- acceptability

The examples covered range from urban congestion schemes to the impact of the internalization of externalities accompanying the revision of the Eurovignette Directive through the experiences of pricing related to the distance traveled. Infrastructure charging is not effective in reducing the total demand for transport on inter-urban roads and therefore has no environmental effect.

The situation is different for urban pricing. Social acceptance is a key determinant for the success of the implementation of urban systems: neutrality in terms of revenue or their use to improve public transport may contribute to mitigating the social rejection.

For the full report, download free at: [Table of content \(831KB\)13728,WEB-2012R01EN.pdf \(4.5MB\)](http://www.piarc.org/en/2012/07/11/13728WEB-2012R01EN.pdf) and the French version: [La tarification routière dans le monde et l'évaluation de ses effets, download free at: Table of content \(691KB\)13720,WEB-2012R01FR.pdf \(3.3MB\)](http://www.piarc.org/en/2012/07/11/13720WEB-2012R01FR.pdf). Please visit the PIARC website at: <http://www.piarc.org/en/>

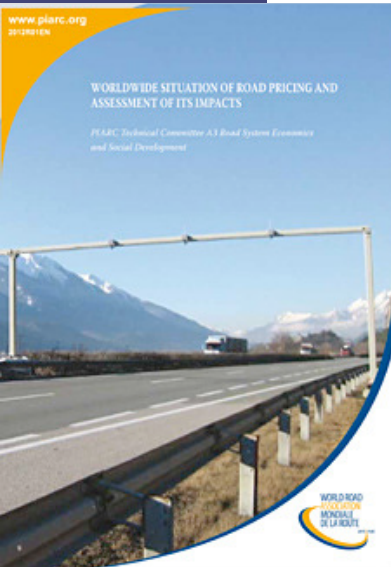
Mayor Marks Completion of First Pervious Concrete "Green Alleys" in Nation's Capital, USA

Sustainable DC Initiative Helps Control Storm Water Runoff and Pollution

On July 11, 2012, District of Columbia (Washington, D.C., USA) Mayor Vincent Gray joined officials from the District of Columbia Department of Transportation (DDOT) and the District Department of the Environment (DDOE) to celebrate another step forward towards a more "Sustainable DC" (www.sustainable.dc.gov) with the completion of the District's first "Green Alleys". The Green Alley Pilot is part of the Mayor's "Sustainable DC initiative" to make the District the nation's greenest, healthiest, most livable



<http://sustainable.dc.gov/>



Author(s): Technical Committee A3 Road System Economics and Social Development
 Domain(s): Financing, Funding / General / Road policies
 PIARC Ref. 2012R01EN



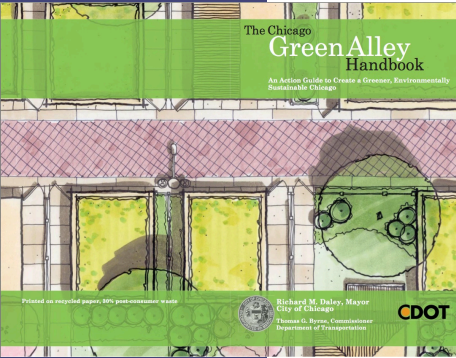


city. The projects are aimed at reducing the quantity and improving the quality of stormwater runoff within the District's right-of-way (ROW).

Although relatively new to Washington, D.C., Green Alley Projects have been established in many other U.S. cities as early as 1999. A few of these cities include Seattle, Washington; Chicago, Illinois; and Detroit, Michigan. The D.C. project is funded through a combination of local dollars and funding received from *the American Recovery and Reinvestment Act of 2009*, through the US Environmental Protection Agency.



Mayor Gray watched as workers poured water on a newly constructed alley in Northeast Washington to demonstrate how stormwater seeps into the pervious surface rather than running into storm drains.



Three (3) initial Green Alley Project sites are included in DDOT's pilot program. A fourth (4th) green alley will be constructed later this summer and eight (8) additional alleys are under design. The Green Alleys use sustainable design and Low Impact Development (LID) techniques that reduce the amount of stormwater and pollutants entering the sewer system, streams and rivers. DDOT constructed these 3 pilot green alleys by replacing the gravel and impervious concrete or asphalt surfaces with **pervious concrete**, having voids that allow water to pass through the surface, then percolate down through a gravel layer and into the soil below rather than running off into sewers.



DC Mayor Gray with DOE and DDOT reps at the opening of the first green alley. Mayor stated: "This will help DC become more sustainable!"
- source: @mayorvincegray via Twitter®

For the full District of Columbia Press Release, please go to: <http://dpw.dc.gov/DC/DDOT/About+s+Completion+of+District%27s+First+%27Green%27+Alleys>

For DDOTDC's Green Alley Projects details, please go to: <http://dpw.dc.gov/DC/DDOT/Projects+and+Planning/Environment/Green+Alley+Projects>; and to: ddot.dc.gov.

For more information about the Mayor's Sustainable DC vision, please visit: <http://sustainable.dc.gov>

For a few other U.S. Green Alley Projects, please go to:

- **Seattle, Washington Street Edge Alternative project** (1999): <http://www2.cityofseattle.net/util/tours/seastreet/slide1.htm>

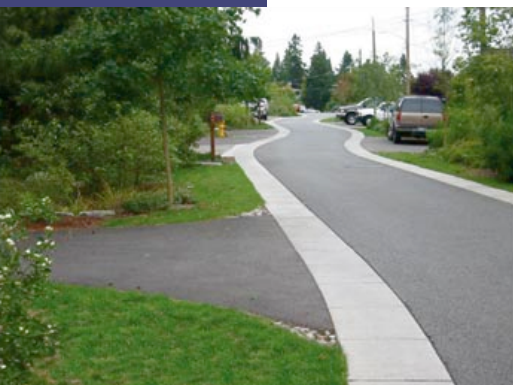
- **Chicago, Illinois Green Alley Program** (2006): http://www.cityofchicago.org/city/en/depts/cdot/provdrs/alley/svcs/green_alleys.html

Chicago Green Alley Handbook (cover image top): http://www.cityofchicago.org/dam/city/depts/cdot/Green_Alley_Handbook_2010.pdf

- **Detroit, Michigan Midtown Green Alley Project 101** (2011): http://www.greengaragedetroit.com/index.php?title=Green_Alley_Project

For Green Alley Projects information, please view the 2010 article titled "Paving Paving Everywhere. Not a Drop Will Sink" by Jovan Tanasijevic, *Designer, B. Arch program at Boston Architectural College* at: <http://architectureboston.wordpress.com/tag/water/>.

Seattle, Washington: Street Edge Alternative Project Program



Detroit Michigan Green Alley Program - 2 Photos: Before and After

CONFERENCE NEWS & UPDATES

Register and Save \$100 for the International Conference on Long-Life Concrete Pavement (LLCP) 2012, in September

Register for the International Conference on Long-Life Concrete Pavements by July 31 and save \$100! The conference will be held in Seattle, Washington, September 18-21, 2012:

To register, please go to:

http://registeruo.niu.edu/iebms/wbe/wbe_p1_main.aspx?oc=40&cc=WBF4012096.

For the Hotel Group Rate, available until **August 18, 2012**, (subject to availability), please go to:

<https://www.starwoodmeeting.com/StarGroupsWeb/booking/reservation?id=1111041746&key=598B8>

For the Preliminary Program and Conference Website, please go to:

<http://www.fhwa.dot.gov/pavement/concrete/2012conf.cfm>.

For more information, please contact: Shiraz Tayabji, *Fugro Consultants, Inc.*:

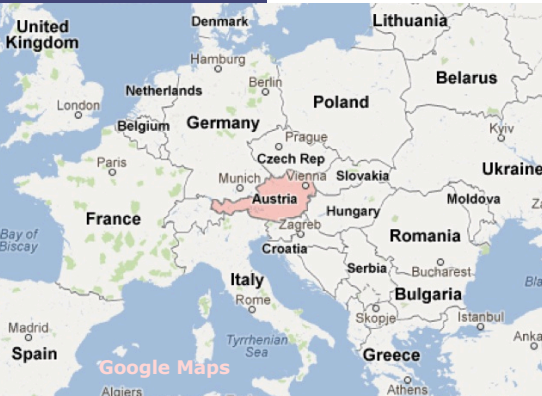
Phone: 410-302-0831 | E-mail: stayabji@aol.com



Austria Concrete Paving Day 2012 to be Held in Vienna, Austria on September 25, 2012



"The Austrian Concrete Paving Day 2012" (Österreichischer Betonstraßentag 2012) will be held on Tuesday, September 25, 2012 from 10:00 to 18:00 in Vienna, Austria. This full-day event will be held at House of Industry, Schwarzenbergpl. 4, 1030 Vienna, and is organized jointly by the Association of the Austrian Cement Manufacturers, the Austrian Road Research Society, and the Austrian Society for Construction Technology. The Austrian Concrete Paving Days are a long-standing tradition, typically attended by over 100 participants from Austria and the surrounding countries. Renowned speakers will highlight and discuss the design, construction and maintenance of concrete roads as well as issues of sustainability (long life, environment, recycling, energy conservation, etc.).



Road construction is a hot topic in the field of infrastructure because of the demands for reduced CO² emissions, reduced maintenance, improved security and stability as well as continuing issues of climate change on production and operating.

Here are just a few headline topics:

- What is the significance of concrete roads in the future?
- What can concrete solutions offer to the problems of road construction?
- What happens to infrastructure construction at the end of life?

The papers are presented in German, but simultaneous translation into English will be provided.

The Program for 2012 will soon be available in both German and English on the Austrian Cement Makers' Association website at: www.zement.at Then click on: "Termine 25.09.2012 Österreichischer Betonstraßentag".

CALL FOR ABSTRACTS



The World Road Association is pleased to announce the Call for Abstracts for the 14th International Winter Road Congress, which will be held in Andorra -la-Vella, February 4 to 7, 2014. The theme of the conference is **"Reconciling road safety and sustainable development in a context of climate change and economic constraints"**. The abstract must be submitted in either English or French, with a maximum of 400 words, before **December 31, 2012**.

<http://chrisinbrnocr.blogspot.com/2012/04/andorra-la-vella-andorra.html>

Abstracts may be submitted on the following topics:

1. Winter service and climate change
2. Costs and benefits of winter service in a constraint budgetary context
3. Extreme events in winter time
4. Winter service management
5. Operational approaches, equipment and products for winter conditions
6. The road user in winter conditions
7. Road tunnels in winter conditions
8. Road bridges in winter conditions

Before submitting an abstract, please read the detailed description of the topics of the call for papers by downloading:

<http://www.aipcrandorra2014.org/wp-content/uploads/2009/12/Andorre2014E.pdf>

The abstracts will be reviewed anonymously by the PIARC Technical Committees and authors will be notified of decisions by e-mail before April 1, 2013. The criteria to assess the papers will be based on the originality of the content, the technical interest and the applicability and transferability of the results. A prize will be awarded for the best papers among individual contributions. Accepted papers will be presented during poster sessions and included in the Congress proceedings and outstanding papers will be selected for oral presentation during the technical sessions of the Congress. Publication of the accepted papers is subject to the registration of at least of one of the Co-authors. All papers must be original work available to be released for publication. More information will be released later on the Congress website.



<http://chrisinbrnocr.blogspot.com/2012/04/andorra-la-vella-andorra.html>

IMPORTANT DATES:
DECEMBER 31, 2012
Deadline for abstracts
APRIL 1, 2013
Notice of acceptance of abstracts
JULY 31, 2013
Deadline for full text of papers
OCTOBER 31, 2013
Notice of review of papers
FEBRUARY 4-7, 2014
XIVth International Winter Road Congress Andorra 2014

Organized by the World Road Association and the Govern d'Andorra, this is the 14th World Road Congress in a series of conferences that bring together attendees from around the world. Located high in the east Pyrenees Mountains between France and Spain, Andorra-la-Vella is the highest capital city in Europe with an elevation of 1,023 meters (3,356 feet) and is the capital of Andorra. The Congress is not just taking place in Andorra-la-Vella, but extends to the whole country of Andorra, France, Spain and the whole of the Pyrenees, making the scenario for this event very different from previous hosting venues of the Congress. Andorra-la-Vella combines the cosmopolitan elements of a 21st century city with the history and characteristics of a mountain village, having evolved at an astonishing rate, from being a purely rural center to being the capital of the Pyrenees!

For conference information, please go to: <http://www.aipcrandorra2014.org/?lang=en>
For more information, please contact Govern d'Andorra by e-mail at: info@andorra2014.org

RECENT ABSTRACT

Using Recycled Concrete as Coarse Aggregate in Pavement Concrete

Verian, Kho Pin, M.S.C.E., *Purdue University, May 2012.*

Major Professor: Jan Olek

The main objective of this study was to evaluate the effects of using aggregate produced from recycled concrete as a replacement for natural (virgin) coarse aggregate in pavement mixtures. All mixtures containing the recycled concrete aggregate (RCA) were designed to meet the requirements of Indiana Department of Transportation (INDOT) specifications. The scope of the study included evaluation and comparison of several properties of RCA and natural aggregates, evaluation and analysis of the effects of RCA on concrete properties, and modification of aggregate gradations and mixture composition in an attempt to improve the properties of RCA concrete.

A total of ten different concrete mixture types were produced in the course of this study. These included three different RCA replacement levels (30%, 50% and 100% by weight of the natural coarse aggregate) and two different cementitious systems (plain system – Type I portland cement only and fly ash system – 80% of Type I portland cement and 20% of ASTM C 618 Class C fly ash). All ten mixtures were first produced in the laboratory (trial batches) and subsequently reproduced in the commercial ready mixed concrete plant. Each mixture produced in the ready mixed plant was used to prepare several types of specimens for laboratory testing. The tests performed on fresh concrete included determination of slump and entrained air content. The mechanical properties of the hardened concrete were assessed by conducting compressive strength, flexural strength, modulus of elasticity and Poisson's ratio tests. The durability of concrete was assessed using wide array of measurements, including: rapid chloride permeability (RCP), rapid chloride migration (RCM), electrical impedance spectroscopy (EIS), surface resistivity, free shrinkage, water absorption test, freeze-thaw resistance and scaling resistance.

The test results indicated that the properties of plain (no fly ash) concrete mixtures with 30% RCA as coarse aggregate were very comparable (in some cases even better) than those of the control concrete (0% RCA). Although mixtures with 50% RCA showed up to 36% reduction in durability and mechanical properties, the test results still met INDOT's specifications requirements. However, the mechanical properties of plain concretes made with 100% RCA were measurably lower (16%-25%) than those of the control concrete. It should be pointed out, however, that these properties were still above the minimum required by INDOT's specification, the only exception being the w/c value that needed to be elevated to 0.47 from the maximum recommended of 0.45.

The use of fly ash improved the quality of RCA concrete, especially at later ages. In particular, the properties of concrete with 50% of RCA were similar to the properties of control concrete. Similarly, the properties of mixture with 100% RCA improved when compared to the same mixture without fly ash and the concrete met minimum requirements imposed by INDOT's specifications. However, when compared to the fly ash concrete with 100% virgin aggregate the mechanical properties of the 100% RCA concrete were up to 19% lower.

The results of all tests performed during this study were used to develop several statistical models which can be used to predict selected properties of the RCA concrete, thus reducing the number of laboratory test required to be performed on the actual mixtures. The developed models can be used to predict the following properties: slump, 7-day flexural strength and 56-day bulk resistance. These models were successfully verified using results from several independent (not used in the original model development) mixtures.

Once the testing of the original ten types of concrete mixtures was completed, six additional concrete mixtures were produced, each with modified (with respect to original mixtures) gradation of aggregate. These mixtures were used to study if the virgin and RCA aggregates can be combined in different proportions to produce the "optimized blend" which will improve one (or more) concrete characteristics. The test results obtained from the six additional mixtures indicated that modifying the aggregate gradation did not have beneficial effects with respect to either compressive or flexural strength values.

Considering limited scope of this study (only one source of RCA aggregate was used) it is recommended that the amount of RCA in plain concrete be limited to 30% and that in the fly ash concrete be limited to 50% to ensure the adequate quality of the pavement concrete.

Key words: recycled concrete aggregate (RCA), pavement concrete, mechanical properties, durability properties, rapid chloride permeability, electrical impedance spectroscopy, shrinkage, plain concrete, fly ash concrete.

CALL FOR ABSTRACTS & PAPERS DIGEST

August 1, 2012 The submission site for committee Calls for Papers for the 2013 TRB Annual Meeting is open for your use at: <http://pressamp.trb.org/CallForPapers/callsforpapers.asp>. Please use the submission form and follow the instructions that are linked to it. Subject area categories' descriptors may be found at: <http://onlinepubs.trb.org/onlinepubs/am/calls/Subjects.pdf>

August 15, 2012 Abstracts are invited on the topics outlined and other subjects related to the theme of the 9th International Conference and Exhibition on Concrete for Sustainable Construction to be held February 11-13, 2013 at the Gulf International Convention Center, Gulf Hotel Kingdom of Bahrain.

All abstracts are due and should be forwarded through the Conference website at: www.concrete9.org or e-mail info@concrete9.org, vivek@mohandis.org.



A prize of US \$10,000 will be given to the author(s) of the Best Technical Paper presented at the Conference.

December 31, 2012 Call for abstracts due for the 14th International Winter Road Congress to be held in Andorra, February 4-7, 2014. The theme is: *"Reconciling road safety and sustainable development in a context of climate change and economic constraints"*. For information, please go to: <http://www.aipcrandorra2014.org/?lang=en>.

UPCOMING EVENTS

**AUGUST
2012**

MAIREPAV7 Conference

August 28-30, 2012 in Auckland, New Zealand
<http://www.mairepav7.co.nz/>

SWIFT 2012 Conference and Trade Show

September 17 - 21, 2012 in Banff, Alberta, Canada
<http://www.swiftconference.org/>



FHWA ACPT International Conference on Long-Life Concrete Pavements

September 18-21, 2012 in Seattle, Washington, USA
<http://www.fhwa.dot.gov/pavement/concrete/2012conf.cfm>

7th Symposium on Pavement Surface Characteristics (SURF 2012)

September 19-22, 2012 in Norfolk, Virginia, USA
<http://www.cpe.vt.edu/surf2012/index.html>

4th International Conference on Accelerated Pavement Testing (APT 2012)

September 19-21, 2012 in Davis, California, USA
<http://ucprc.ucdavis.edu/APT2012>

Austria Concrete Paving Day

September 25, 2012, 10:00 - 18:00, in Vienna, Austria
www.zement.at ("Termine 25.09.2012 Österreichischer Betonstraßentag")

Tenth International Conference on Superplasticizers and Other Chemical Admixtures in Concrete

October 2012 in Prague, Czech Republic
<http://www.intconference.org/>

Twelfth International Conference on Recent Advances in Concrete Technology and Sustainability Issues

October 2012 in Prague, Czech Republic
<http://www.intconference.org/>

10th International Symposium on Brittle Matrix Composites (BMC10)

October 15-17, 2012 in Warsaw, Poland
<http://bmc.ippt.gov.pl/>



2nd International Conference on Sustainable Construction Materials: Design, Performance and Application (SusCoM2012)

October 18 - 22, 2012 in Wuhan, Hubei Province, China
<http://public.whut.edu.cn/zspj/suscom2012/>

5th International Congress on Sustainability of Road Infrastructures

October 29-31, 2012 in Rome, Italy
<http://www.sivroma.it>

2012 International Pavement Engineering Conference (IPEC)

November 1-3, 2012 in Busan, South Korea
<http://www.ipec2012.or.kr>

2nd International Conference on Civil Engineering and Building Material (CEBM 2012)

November 17-18, 2012 in Hong Kong
<http://www.iasht.org/cebm/>

For events taking place in 2013 and beyond, please go to:
<http://www.concretepavements.org/calendar.htm>.



The ISCP Newsletter is produced monthly by:
Editor-in-Chief & Art Director:

Amy M. Dean
aimdean@nc.rr.com

Technical Editors:
Corey Zollinger,
Nancy Whiting,
Cristian Gaedicke and
Robert Rodden

Chief Correspondent:
Neeraj Buch, Ph.D.
secretary@concretepavements.org

ISCP would like to acknowledge
Dr. Hermann Sommer
(Austrian Cement
Research Institute)
and
Greg Dean (ACPA-SE)
for contributions to this issue.

ISCP invites ISCP members and friends to submit articles and calendar items to the Editor-in-Chief for future issues.

ISCP President:
Mark B. Snyder, Ph.D., P.E.
president@concretepavements.org

Vice-President:
José T. Balbo, Ph.D.
vice-president@concretepavements.org

Secretary/Treasurer:
Neeraj Buch, Ph.D.
secretary-treasurer@concretepavements.org

Please visit the **ISCP Website** at
www.concretepavements.org
for more information about ISCP.

Maps, globes: National Geographic Family Reference Atlas of the World ©2002 National Geographic Society, Washington, D.C. & Concise Earth Book World Atlas ©1987 Graphic Learning International Publishing Corporation, Boulder, Colorado, Essetile Map Service AB Stockholm.

All additional sources noted on perspective pages.

**SEPTEMBER
2012**

**OCTOBER
2012**

**NOVEMBER
2012**