

ASCE

AMERICAN SOCIETY OF CIVIL ENGINEERS

INDIA SECTION

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Updates on ICSCI-2014

Dear Esteemed Members,

Greetings!

As you all know, India Section of ASCE is organizing an International Conference on Sustainable Civil Infrastructure (ICSCI 2014) on 17-18, October 2014. The conference has received overwhelming response from India and Abroad in terms of abstract submission. We are happy to announce that more than 280 high quality abstracts were received by the last date for submissions. Abstracts are under review and we will intimate the decision of the committee to the authors by 15th May.

The knowledge base that we are aiming to generate on Sustainable Infrastructure from this conference would be enormous due to the participation of experts from various sectors of Civil Engineering arena.

We have been receiving quite a few enquiries from Bachelor's students across the country that they want to participate in the conference and present a paper. The organizing committee is deliberating on encouraging participation of ASCE young student members without a paper presentation as well. The number of such participants will be limited and will be filled by first come basis. Once decided, this information will be published in coming newsletters and on the conference website.

Hope, this international conference will not only provide a member meet, but also provide a common platform for academia and practitioners to discuss issues related to the Sustainability aspects of infrastructure development in India and abroad.

We look forward to seeing you in Hyderabad.

Best regards

Prof. G L Sivakumar Babu & Dr. SireeshSaride

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News from Regions

Eastern Region News

The 29th National Convention of Architectural Engineers and National Seminar on “Innovative World of Building Materials”

The 29th National Convention of Architectural Engineers was held at Kolkata on January 30 and February 01, 2014. In this occasion, The Institution of Engineers (India) organised one National Seminar on “Innovative World of Building Materials”. ASCE-India Section joined hand with IE(I) to organise this National Seminar. Prof. (Dr.) C. Saha, Chairman, WBSC, IE(I) welcomed the delegates and dignitaries In the inaugural ceremony of the National Convention. Prof. (Dr.) SivakumarBabu, President, ASCE-IS addressed the august gathering as Special Guest.



Inauguration of National Convention of Architectural Engineers

The convention was inaugurated by JanabFirhad Hakim, Hon'ble Minister-in-Charge of Urban Development and Municipal Affairs, Government of West Bengal. In his address, the Minister assured that as demanded by the Engineers, the Bengal Municipal Act and the Kolkata Municipal Corporation Act would be amended very soon to include the representation of Engineers in the Municipal Building Committee. Prof. (Dr.) Ajay Kr. Ray, Vice Chancellor, Bengal Engineering & Science University, Shibpur and Mr. AsokBasa, President, The Institution of Engineers (India) also addressed the gathering. The theme of the seminar was explained by Ar. P.R. Das, former Executive Director of HUDCO and Chairman, Technical Committee of the Convention. Mr. Ashok Kumar Roy Chowdhury, Chairman, High Level Technical Committee, Government of West Bengal, as Working Chairman of the Convention, provided a bird's eye view of the Convention. The Vote of Thanks was delivered by Mr. D K Dhar, FIE, AMASCE. As Master of the Ceremony, Mr. Sandip Kumar Deb, President, ASCE-ISER and Honorary Secretary, IE(I), WBSC, anchored the entire programme.

Immediately after the Inaugural Ceremony, Mr. Edward Schwarz, General Manager, Holcim Foundation for Sustainable Construction, delivered the T.S. Narayana Rao Memorial Lecture on the theme “Innovative Building Materials for Sustainable Development”. The State of the Art lecture was delivered by Dr. K KGanguly, Technical Director, Development Architects (P) Ltd.

The Seminar had five sub Themes viz.

- I. Sustainability through Use of Local and Eco-Friendly Materials,
- II. Materials for Skyscrapers,
- III. Materials for Restorations and Rehabilitation
- IV. Materials for Inner Beauty (Interior Decoration)
- V. Hazard Resistant Materials.

In all 17 papers were received and 14 papers were presented besides two presentations from Industries. S P Anchuri, Secretary of ASCE-SR presented a paper - Eco Conscious Structural Architectural Interior Design ECSAID. He spoke about eco conscious design of interior spaces using materials, products and systems from a network of raw materials.

More than 400 delegates participated in the Convention. There was an ASCE Information Booth in the Seminar venue to distribute different information brochures on ASCE. The entire programme was a grand success.

Initiation of ASCE Student group at Narula Institute of Technology

The forming ASCE students' group of Narula Institute of Technology organized “Picture Perfect”, an intra-college Bridge Photography Competition similar to Bridge photography competition by ASCE. The photos were submitted only by the ASCE student members from Narula Institute of Technology. So many enthusiastic students have submitted the photographs in due time (Feb 6, 2014). The judge of the awards was Mr. Sandip Kumar Deb, President, ASCE-India Section, Eastern Region. This event was sponsored by AECOM.

A Power Point Presentation Competition on “Opportunities in field of Civil engineering field” was also organized by the students on February 7, 2014 at the model class room of the college. This event was aimed to prepare a presentation which will give an overview of opportunities in field of Civil Engineering profession to the K-12 students. Each team was allowed with maximum two participants who presented it within 15 minutes. Several students participated in this competition. The prize for the champion was sponsored by AECOM. (Pic. 1)

Mr. Sandip Kumar Deb also delivered a lecture on “How to prepare for Job Interview” (Pic. 2). He focused on the various levels of preparation that is required to face and successfully overcome the chal-



Picture 1. Champion team of PPT competition receiving award from Mr. Saha, Sr. Building Engr. AECOM

lenges during job interview. He distinctly emphasized on few important points like professional attire, punctuality above all attitudes of the job aspirants towards prospective employers. He also advised the students about the different trending career opportunities in present scenario.



Picture 2. Mr. Deb, during question-answer session after his talk

Southern Region News

International Civil Engineering Symposium-ICES 2014 at Vellore Institute of Technology

The American Society of Civil Engineers Indian Section, Vellore Institute of Technology hosted the first of its kind, International Symposium on Civil Engineering, ICES' 14, the likes of which have never been seen before. Spanning full 3 days, 14th-16th March 2014, the symposium attracted around 800 participants from 80 different colleges across the country, making it a huge success.

It was inaugurated with the guest lectures by the venerable guest speakers Dr. Swarna Subba Rao (Surveyor General of India, Survey



Inaugural ceremony of ICES 2014

of India), Mr. Vishnu Shankar Prasad (Secretary General, Indian Road Congress) and Mr. Jay Prakash Gandhi (Career consultant) who filled the audience with their insight towards civil engineering. The same can be said about the valedictory function where the center stage was stolen by the brilliant Mr. Shankar Narayan (Deputy Manager, Murugappa Group) and Mr. K P Pradeep (Secretary ASCE IS Southern Region).

First and foremost, the brightest minds of our country, from various fields of engineering, delivered their bountiful wisdom in more than 6 guest lectures - Dr. G. R. Dodagoudar (Associate Professor, IIT, Madras), Dr. P. K. Suresh (Research Head, Centre for Excellence for Change) and Dr. V. Shanmuga Sundaram (Former Head, Department of Civil Engineering, College of Engineering Guindy, Anna University). Their presence was greatly appreciated by all.

Paper and poster presentations in the fields ranging from Geotechnical, Environmental, Transportation to Structural, came pouring in from all over the continent displaying immense class and quality. Selected papers are being published in the International Journal of Earth Science and Engineering in association with Cafet-Innova Technical Society.

10 workshops were conducted like Geotechnical Earthquake Engineering, Water Resource, Construction Surveying and Advances in Transportation Engineering gave an altered approach to the students. Bridge Design and Fabrication and Seismic Design, specialised in providing hands-on practical session on CAD giving each team the opportunity of self-fabricating and testing a model, attracted many. The civil engineering softwares weren't left out. A workshop on Primavera (P6) and Midas Gen (by experts from MIDAS) gave the participants a chance to learn and master these software. The two day workshop, Disaster Response and Preparedness, brought guest lectures and discussions from National Disaster Response Force (NDRF) which was filled with table top exercises and exhibition of equipment the disaster management forces use. NDRF personnel demonstrated an actual evacuation plan and executed the rescue processes in case of a disaster scenario. Geospatial Technology workshop, taught the attendants how to map and take field data and integrate it with GIS platform was accompanied by a lecture from Maj Gen (Dr) B Nagarajan (Additional Surveyor General, Indian Institute of Survey and Mapping, Survey of India).



Organizing committee of ICES 2014

Events such as Flight Deck-design a floating runway, Quantity Take OFF -design and estimation, Zenith -Designing and building an arch bridge without using binding material and Online CAD racked many brains and took a whole new level. Another climax of the symposium was United Civil Engineering Summit, involved discussion of various trending topics in civil engineering and was dealt with a system similar to a Model United Nations conference. This brought up many philosophies in the open field and the horizon of concepts of civil engineering broadened.

From the guest lectures to the mind boggling events, from the united civil engineering summit to the workshops and the model exhibition, with participation of professors, academicians, students, research scholars from all over the country, ICES'14 can be proudly regarded as a huge success.

Western Region News

Inauguration of Student Chapter at Mukesh Patel School of Technology Management and Engineering, Mumbai

An Inaugural Ceremony for the Student Chapter turned out to be an enthralling 2-day event in the name of 'Ingeniero 2014' for the students and faculty of the Civil Engineering Department at Mukesh Patel School of Technology Management and Engineering (MPSTME).

DAY 1: 4th April 2014

Testing one's dexterity is an important factor that contributes to the nurturing of one's concepts about their respective fields of study. With this mind-set, CESA set out determined to put to task the engineering skills of the students and organised a melange of activities on the first day of this occasion.

Three activities had been orchestrated over a span of roughly seven hours. About more than 110 Participants from six colleges in Mumbai and peripheral region had participated in these events.



Students engrossed in making Bridges in Bridge Building Competition

1. Bridge Making Competition

This competition put to test the students' basic understanding of connections. Designing a hi-tech, robust bridge was not the challenge, but instead designing a simple but effective bridge with the use of only ice-cream sticks that could withstand 10 kg of load made the participants scratch their heads. It is indeed hard to conceive the idea of a bridge, made out of mere wooden sticks, bearing such enormous onus and that too restricted to only 84 sticks! But surprisingly, the winners Mr. Dhruv Patel and Mr. ChiragRathi of Third Year B. Tech of MPSTME beat the odds and fabricated a bridge truss, satisfying all the pre-requisites that could take the load quite easily! Their concept proved to be the paradigm, reinforcing the fact that the need to understand the basics of any field is of the essence. The runners-up were Mr. Jainam Shah and Mr. Ankit Raj also from Third Year MBA Tech of MPSTME. 25 teams, each comprising of two students participated in the event.

2. Quiz Competition

General knowledge lays the foundation for a smarter being. Being aware of where and how the technology is accelerating, especially in one's own field of study, enables them to become the maestros of their branch. The quiz competition was held to make the participants cognizant of the trends and techniques currently employed in civil engineering across the globe. Questions relating to various areas of specializations within civil engineering were asked to the students.

To cope up with the massive participation number, screening round was conducted, wherein students appeared for a paper-based test. Top 5 scorers went on to compete in the Question-Answer session comprising of four rounds of rapid fire. In all 25 teams, each comprising of two students participated in the event.

The winners, Mr. JigarSoni and Mr. Ankit Asher, from Datta Meghe College of Engineering, Airoli, Navi Mumbai, bagged the first prize and the runner-up prize was awarded to Mr. NishantDoshi and Mr. ParthBhadra from Third Year B. Tech. of MPTSME.

3. Elocution Competition

The presentation skills of the students were tested by the Elocution Competition. Such competition also motivates the students to gather the knowledge about the updates in technology in their field of interest. The Joint Winners of this competition were Mr. Rounak Desai, of Third Year B. Tech. of MPSTME and Mr. Nihar Trivedi and Ms. Natasha Hule, from Saraswati College of Engineering, Kharghar, Navi Mumbai. The Runners-up prize was awarded to Mr. Mukul Patel and Mr. Vrushabh Mistry, K.J. Somaiya Polytechnic, Vidyavihar, Mumbai

DAY 2: 5th April 2014

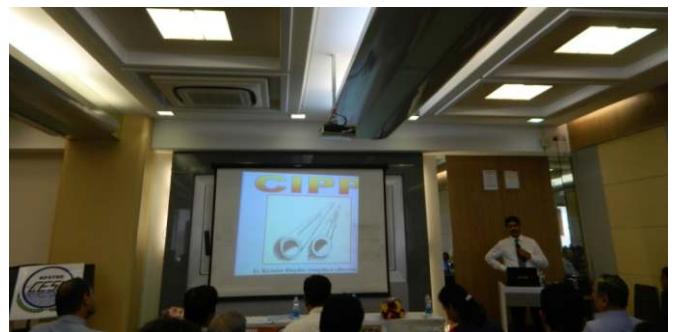
The Chief Ceremony of official Inauguration of the Student Organization- 'Civil Engineering Student Association' (CESA) was initiated on the second day of Event- Ingeniero 2014. Mr. Arvind Shah, The President, ASCE-India Section Western Region (ISWR) and Mr. Ravindra Ringshia, Treasurer and Joint Secretary, ASCE-ISWR were the Guests of Honour. The Inauguration Function commenced with lighting of lamp and thereafter, with the invocation of God by Dr. Meenal Mategaonkar in classical music based recitation- the 'Saraswati Vandana'. Then Dr. S. Y. Mhaiskar briefed about the NMIMS University, MPSTME and the Civil Engineering Department. Then Inauguration of CESA was formally done by the hands of Mr. Arvind Shah and Mr. Ravindra Ringshia by unveiling the Logo of CESA. Then Prof. Manoj Anaokar expounded the basis of formation of CESA and stated the Vision and Mission of CESA. Mr. Arvind Shah then, informed the audience about the role of ASCE-ISWR and its activities. He enlightened the student members by sharing his experiences over more than five decades as a Civil Engineering Professional. Mr. Ravindra Ringshia informed the students about the benefits of becoming a Student Member of ASCE and briefed them about the benefits as well as the about the role of Student Chapter of ASCE. Then he enlightened the audience through his Lecture Talk about the recent technique of 'Cast in Situ Pipes'. The event concluded with the Vote of Thanks offered by Ms. Priyanka Ramchandani, a Third Year B. Tech Student.



Inauguration of the CESA by
Mr. Arvind Shah &
Mr. Ravindra Ringshia



Audience at the Inaugural
Ceremony



Lecture Talk by Mr. Ravindra Ringshia on the subject of
'Cast in Situ Concrete Pipes'

Tech Briefs

Could floating nuclear plants be the future?



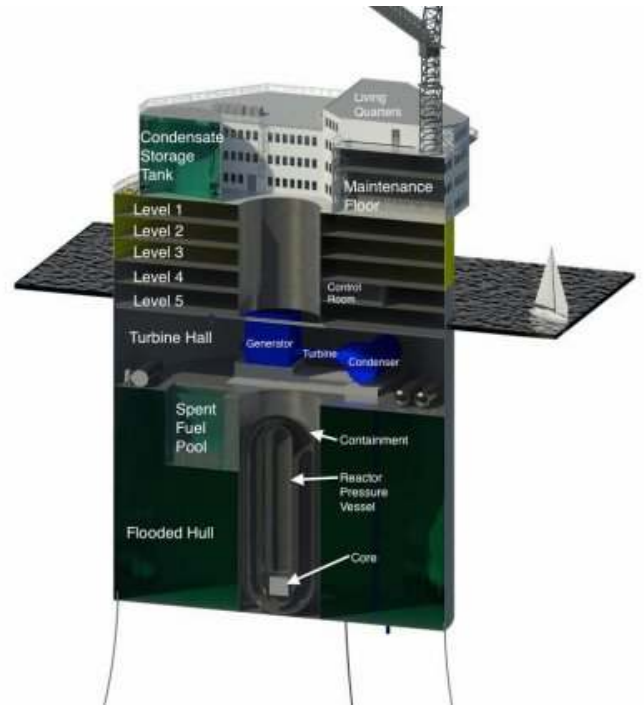
Jacopo Buongiorno, an associate professor of nuclear science and engineering at MIT, believes that by mounting nuclear plants on floating platforms situated miles offshore at sea, the controversial power facilities will be able to better withstand extreme weather conditions, such as the tsunami which was responsible for the Fukushima disaster in 2011.

Buongiorno envisages nuclear plants being built in shipyards before they are towed to locations at sea around 10 kilometres from the shore. The floating plants will then be anchored to the floor of the ocean, and will convey power to land-based facilities via an underwater electrical transmission line. While floating nuclear plants are nothing new, with Russia already in the process converting some of its nuclear fleet into seaborne power stations, Buongiorno's plan differs in that it places the nuclear plants much further away from the shore due to safety considerations. This allows the nuclear plants to better endure severe earthquakes and storms while obviating the possibility of meltdown.

The platforms would be moored approximately 100 metres above the seabed and approximately 10 kilometres from land, making them impervious to earthquakes, as well as largely unaffected by tsunamis. The location of the plants at sea also completely expunges the possibility that they will succumb to the worst of all nuclear disasters – that of overheating and meltdown, because of the vast surrounding body of water.

Other advantages of the arrangement include reducing the cost of operation by removing the need for expensive oceanfront land as sites for the reactors, as well as greater ease of decommissioning, with the plants towed away to a central facility at the end of their operating lives.

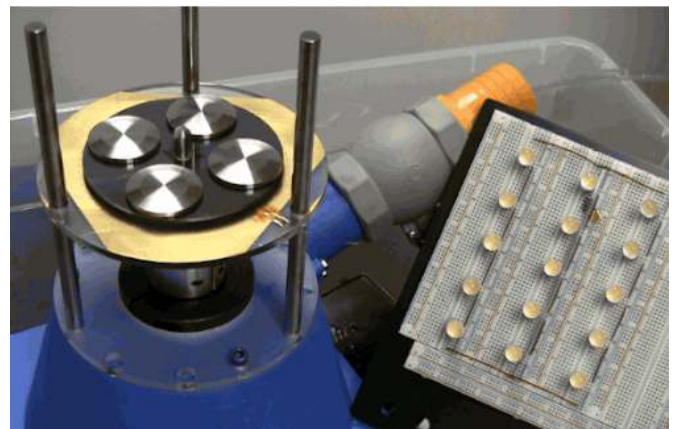
Cutaway view of the proposed plant shows that the reactor vessel itself is located deep underwater, with its containment vessel sur-



rounded by a compartment flooded with seawater, allowing for passive cooling even in the event of an accident.

The design proposed facilitates ease of construction by dispensing with the use of concrete, with the plants consisting entirely of steel. It's also highly scaleable, capable of varying in capacity from 50 to 1,000 megawatts. Buongiorno expects floating nuclear plants to appeal strongly to Asian countries with lengthy coastlines, such as Indonesia and Japan, and believes it could also have strong potential in the African continent and Chile.

A generator that harvests energy from the smallest motions



Researchers have built an electricity generator that can harvest energy from the gentlest movements. They say their device can produce a steady current to power consumer electronics using a gentle breeze, flowing water from a tap or normal body movement.

The Georgia Tech and Chinese Academy of Sciences team, led by materials science and engineering professor Zhong Lin Wang, report the generator creates electricity by harvesting static from a rotating disc that rubs against another stationary one. This static electricity generation, a phenomenon called the triboelectric effect, is the same that causes people who have shuffled their shoes across a carpet to get a shock when they touch something else.

Their work is reported in the journal Nature Communications recently. In it, Wang's team demonstrates the hand-sized triboelectric generator (TEG) recharging a smartphone and powering LEDs, a digital alarm clock and a wireless transmitter. They say the four-inch-diameter device is already sufficiently low-cost and energy-dense to operate electronics and could be ratcheted up to large-scale power generation.

Researchers at University of Wisconsin-Milwaukee come up with new waterproof 'smart' concrete



A research team at the University of Wisconsin-Milwaukee (UWM) have developed a new form of "smart" concrete which requires minimal levels of maintenance over the course of a lengthy service life. The new composite concrete possesses remarkable levels of durability and water-resistance compared to conventional paving materials, resulting in a dramatically longer service life.

Developers of the material which, is referred to as the Superhydrophobic Engineered Cementitious Composite (SECC), estimate that it could possess an operational life of over 120 years, as compared to a maximum lifespan of 50 years for standard concrete roads in the area.

The team is currently in the process of testing these enhanced properties via the incorporation of "smart" features into a sample of SECC used to pave a driveway. The researchers have embedded electrodes approximately an inch below the surface of the con-

crete, and connected them to an adjacent data collection system. The sensors will be able to determine how much water is seeping into the pavement, as well as the level of load and stress it bears as vehicles traverse it, thus permitting the researchers to better determine whether their material is performing as promised.

The key to the durability and longevity of SECC lies in two remarkable innovations developed by the UWM engineers. The first innovation is unique compounds contained by the concrete which result in an extraordinary level of water resistance, which prevents liquids from permeating the material and exacerbating damage in frigid weather.

Water is usually capable of seeping through the cracks in conventional paving materials, causing significant damage when it pools and expands during freezing weather conditions. The compounds in SECC, however, produce heightened water-resistance via the creation of microscopic spikes on the exterior surface of the material. These tiny spikes cause water to behave like an oily liquid when it comes into contact with the concrete, immediately beading into spherical droplets which roll off any angled surfaces with ease.

The second innovation of SECC is its heightened ductility, which enables the material to bend without fracturing or cracking. UWM engineers managed to achieve this enhanced malleability through adulteration of the concrete mixture with super-strong unwoven polyvinyl alcohol fibres, each of which is the width of a human hair follicle.

These tiny fibres serve to stitch the material together, and prevent large cracks from occurring by permitting multiple micro-cracks to form instead. These micro-cracks diffuse heavy stress across the material while remaining too small in size to permit the entry of water. According to the researchers, SECC possesses 200 times the ductility of traditional concrete, enabling it to withstand as much as four times the compression levels.

Welcome to the New ASCE India Website

Your ASCE membership is a career investment. Whether you're just out of college, are newly licensed, have a lifetime of accomplishments, or are anywhere in between, ASCE helps you grow professionally.



Events

Project Management

May 15 - 16, 2014, San Francisco, CA

Wind Loads for Buildings and Other Structures - Fort Lauderdale, FL

May 15-16, 2014, FL - Fort Lauderdale

HEC-HMS Computer Workshop - New Orleans, LA

May 22-23, 2014, LA - New Orleans

Pumping Systems Design for Civil Engineers - Scarborough, ME

May 22-23, 2014, ME - Scarborough

Seismic Design of Highway Bridges - Philadelphia, PA

May 22-23, 2014, PA - Philadelphia

Soil and Rock Slope Stability - Seattle, WA

May 22-23, 2014, WA - Seattle

Construction Administration for Engineers - Baltimore, MD

May 29-30, 2014, MD - Baltimore

Seismic Hazard Evaluation and Mitigation Using Simple Methods - Las Vegas, NV

May 29-30, 2014, NV - Las Vegas

Design of Metal Building Systems: Avoid Pitfalls in Specifying and Procuring - Tampa, FL

May 29-30, 2014, FL - Tampa

33rd PIANC World Congress

June 1-5, 2014, San Francisco, CA

Deep Foundations: Design, Construction, and Quality Control - Salt Lake Cty, UT

June 5-6, 2014, UT - Salt Lake Cty

Design of Concrete Pavements - Long Beach, CA

June 5-6, 2014, CA - Long Beach

Seismic Design of Liquid-Storage Tanks - Arlington, VA

June 6, 2014, VA - Arlington

HEC-RAS Computer Workshop - Cincinnati, OH

June 11-13, 2014, OH - Cincinnati

Introduction to Tunnel Design and Construction - Scottsdale, AZ

June 11-13, 2014, AZ - Scottsdale

Designing Non-Building Structures Using ASCE-SEI 7-10

New Orleans, LA

June 12-13, 2014, LA - New Orleans

Financial Management for the Professional Engineer - San Antonio, TX

June 12-13, 2014, TX - San Antonio

High Wind and Flood Design for

New and Existing Buildings Using ASCE 24 and ASCE 7-10 - Newly Updated - Secaucus, NJ

June 12-13, 2014, NJ - Secaucus

34th International Coastal Engineering Conference

June 15-20, 2014, Seoul, South Korea

Leadership Development for the Engineer - Kansas City, KS

June 19-20, 2014, KS - Kansas City

Design and Installation of Buried Pipes - Portland, OR

June 19-20, 2014, OR - Portland

International Society for Computing in Civil and Building Engineering (ISCCBE) Conference

June 23, 2014, Orlando, Florida - USA

International Conference on Sustainable Civil Infrastructure (ICSCI 2014)

October 17-18, 2014, Hyderabad, India.

DFI 39th Annual Conference on Deep Foundations

Tuesday, October 21, 2014 - Friday, October 24, 2014

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