National Science Foundation
Office of International and Integrative Activities
International Science and Engineering Section

Partnerships for International Research and Education (PIRE)

John Tsapogas, Amelia Greer, and Anne Emig

Webcast July 29, 2014

Webcast outline

- PIRE Introduction (John Tsapogas)
  - PIRE program and organization
- Funding Opportunities for Foreign PIRE Partners (Amelia Greer)
- PIRE solicitation (Anne Emig)
  - How to prepare a strong PIRE pre-proposal
- Questions and Answers

PIRE Introduction

John Tsapogas
Cluster Coordinator
Global Initiatives Cluster

Introduction

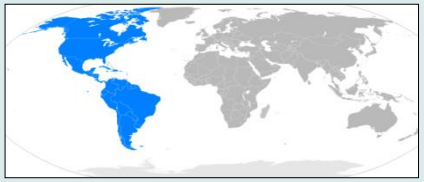
- NSF International and Integrative Activities, International Science and Engineering Section (ISE) structure and organization
- Global Initiatives Cluster
- PIRE
  - ISE managed NSF-wide program
  - PIRE Coordinating Committee (PCC)

ISE Structure

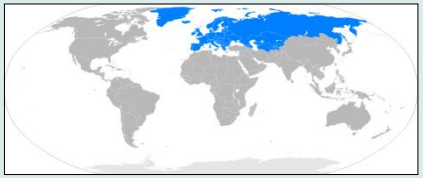
Administrative Management

Overseas Offices
Paris
Tokyo
Beijing

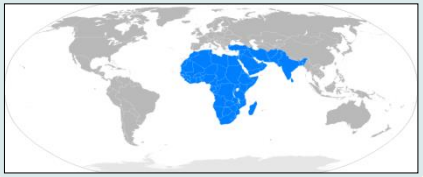
Americas



Europe and Eurasia



Africa, Near East and South Asia



East Asia and Pacific

Global Initiatives

Partnerships for International Research and Education

PIRE Program Synopsis

- PIRE supports international activities across all NSF supported disciplines.
- The primary goal of PIRE is to support high quality projects in which international collaboration provides critical advantages in advancement of research and education. PIRE seeks to catalyze a higher level of international engagement in the U.S. science and engineering community.
- This PIRE competition will be focused on all areas of NSF-supported science, engineering, and STEM education research. It will not be focused exclusively on Science, Engineering and Education for Sustainability (SEES).

PIRE Program History

- Four cohorts of PIRE awards to date
- There are 59 PIRE awards
- Competition outcomes:
  - PIRE 1 2005 12 awards
  - PIRE 2 2007 20 awards
  - PIRE 3 2010 15 awards
  - PIRE 4 2012 12 awards
  - PIRE 5 2015 12 awards (anticipated)
- Average award size in last competition-$4.4M

Summary of PIRE 5

- All Science, Engineering, and STEM Education focus areas
- One pre-proposal per lead institution
- Full proposals by invitation only
- No limit on the number of proposals on which a PI, co-PI can participate
- Proposals with partners from any country are eligible
- Additional funding opportunities with select foreign and domestic partner agencies

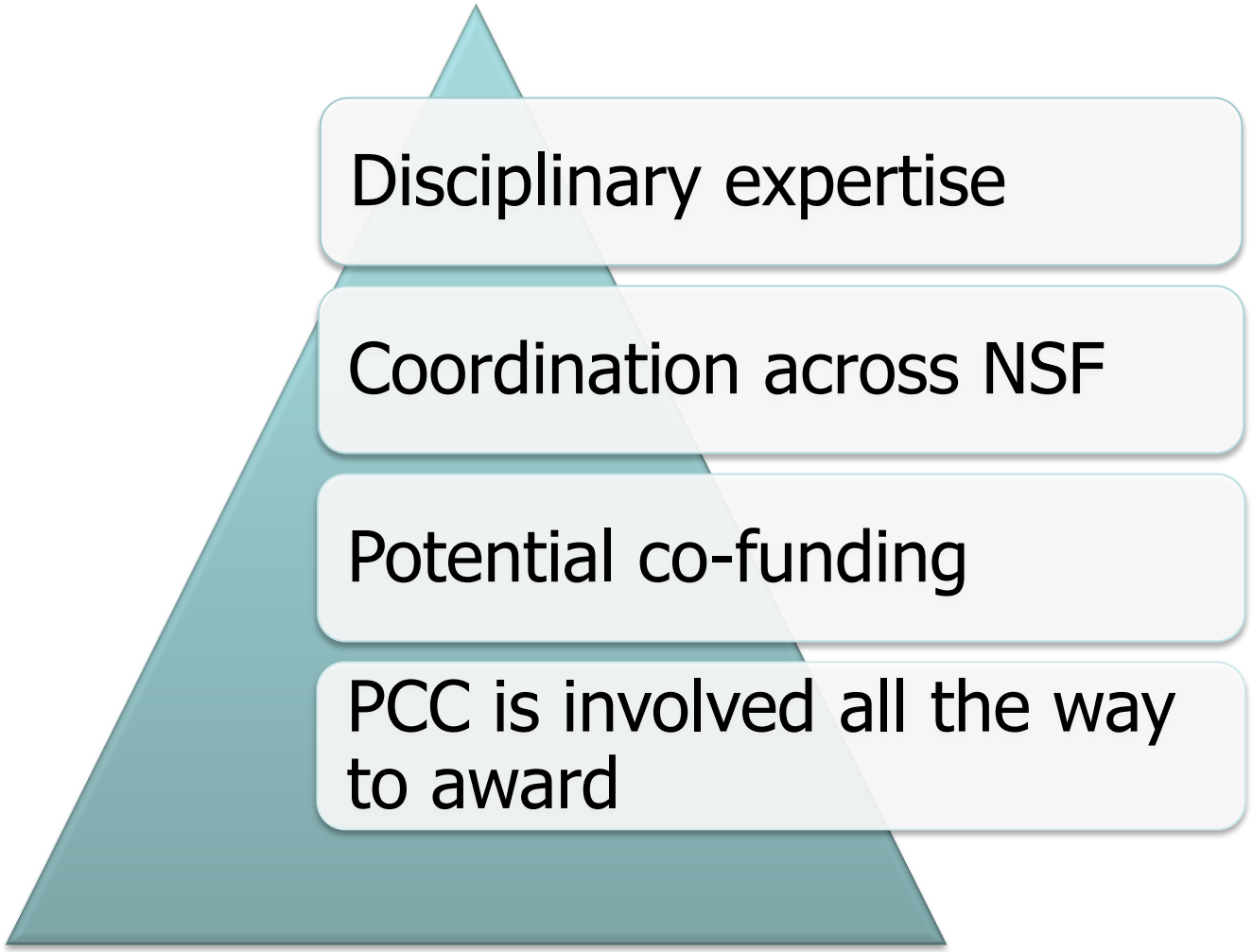
PIRE Competition

- Two stage process
  - Pre-proposal Deadline: October 21, 2014
  - Full Proposal Deadline: May 15, 2015
    - Expect invitations in February, 2015
- Expected Numbers
  - ~200 preliminary proposal submissions
  - 40-60 pre-proposal teams invited to submit full proposals
  - 10-15 awards

PIRE Basics

Budget	• Expected average size ~$5M/per award • Budget request should scale with the scope and effort
Duration	• Up to five years
New Aspects	• Additional funding opportunities for international partners
Decision Making	• Panel recommendations • ISE and PCC program managers • NSF partner agencies representatives

PIRE Coordinating Committee (PCC)



PCC Members Introductions

BIOLOGICAL SCIENCES

SALLY O'CONNOR - SOCONNOR@NSF.GOV, (703) 292-4552

COMPUTER AND INFORMATION SCIENCE AND ENGINEERING

DMITRY MASLOV - DMASLOV@NSF.GOV, (703) 292-8910

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ENGINEERING

JOHN ZAVADA - JZAVADA@NSF.GOV, (703) 292-4555

GEOSCIENCES

MARIA UHLE - MUHLE@NSF.GOV, (703) 292-2250

MATHEMATICAL AND PHYSICAL SCIENCES

LELAND (LEE) JAMESON - LJAMESON@NSF.GOV, (703) 292-4883

SOCIAL, BEHAVIORAL & ECONOMIC SCIENCES

SHOBHANA CHELLIAH - SCHELLIA@NSF.GOV, (703) 292-4381

Funding Opportunities for Foreign PIRE partners

Amelia Greer

PIRE Science Assistant

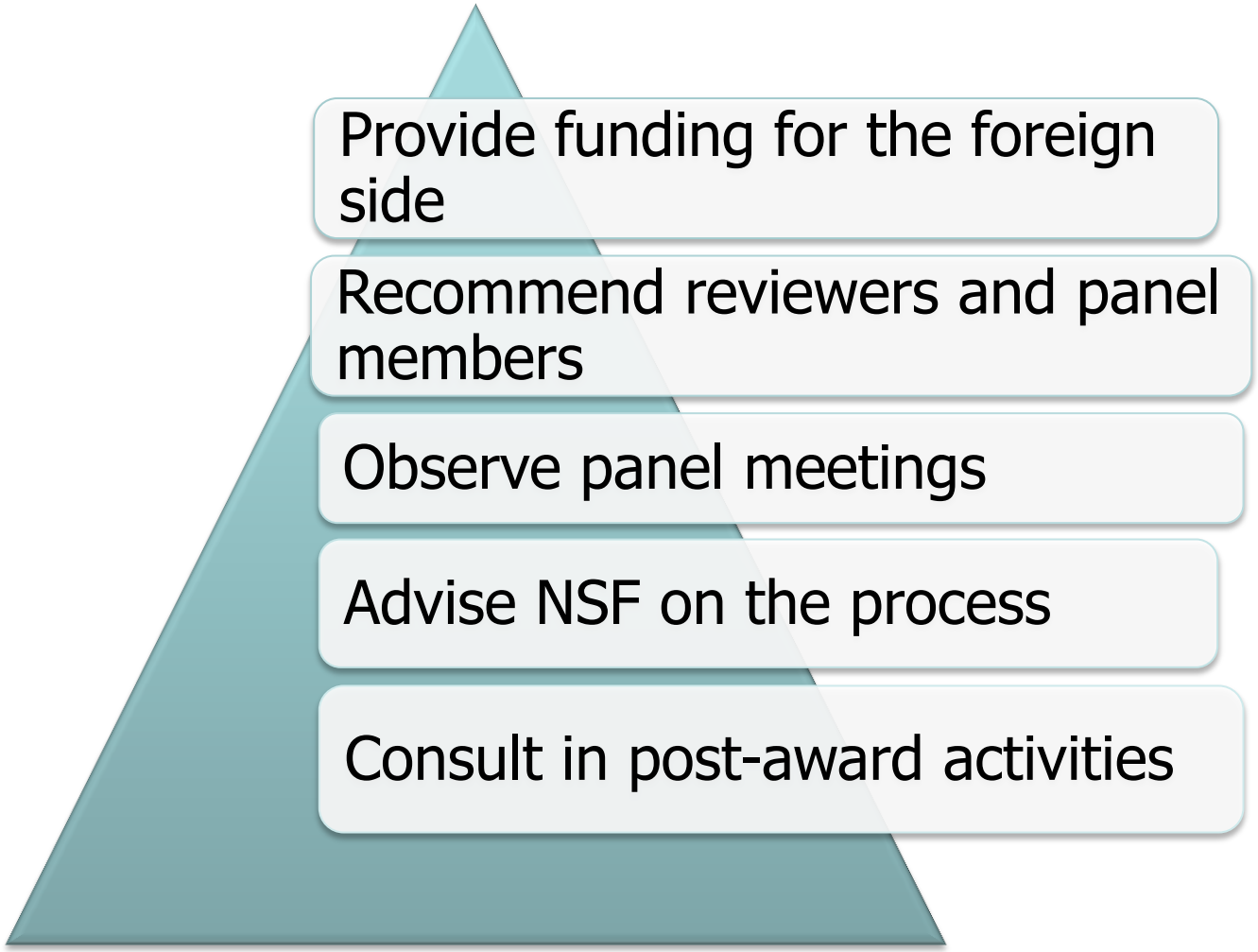
Additional Funding Opportunities

- **China:**
  - **Ministry of Science and Technology (MOST), China**
- **Finland:**
  - **Academy of Finland**
  - **Tekes-the Finnish Funding Agency for Innovation**
- **France:**
  - **Agence Nationale de la Recherche (ANR)**
  - **Centre National de la Recherche Scientifique (CNRS)**
- **Germany:**
  - **Deutsche Forschungsgemeinschaft (DFG)**
- **India:**
  - **Science and Engineering Research Board (SERB)**
- **Japan:**
  - **Japan Society for the Promotion of Science (JSPS)**
  - **Japan Science and Technology Agency (JST)**

Additional Funding Opportunities

- **Korea:**
  - **National Research Foundation of Korea (NRF)**
- **Mexico:**
  - **Consejo Nacional de Ciencia y Tecnología (CONACYT)**
- **Russia:**
  - **Ministry of Education and Science (MES)**
  - **Russian Foundation for Basic Research (RFBR)**
- **Spain:**
  - **Ministry of Economy and Competitiveness (MINECO)**
- **Taiwan:**
  - **Ministry of Science and Technology (MOST), Taiwan**
- **US Agency for International Development (USAID)**
  - **Partnerships for Enhanced Engagement in Research Program (PEER Science)**

Role of Foreign Counterpart Agencies



Additional Funding Opportunity

- Participation in these programs is:
  - Optional
  - Not a requirement
- Proposals will be reviewed based on their merit whether or not a partner agency is involved
- Additional documentation will be required in the proposal on the foreign partnership

Additional Funding Opportunities

- NSF funding will support US PIs
- Partner agencies funding will support international collaborators
- Funding will be awarded in accordance with the policies of each agency

Relevant information about additional submission requirements, proposals and review of proposals is provided in PIRE solicitation

What does this mean to you?

- Applicants are not limited to these additional opportunities
- Applicants are also free to explore any other research funding sources
- Researchers from any country are encouraged to participate in PIRE projects as partners.
- Present your project as an integrated concept, include roles and benefits of all domestic and foreign partners.

Additional Funding Opportunities

Specific programs may be limited to defined research themes

For example:

- Academy of Finland: Science of Learning
- France ANR: Bilateral US-France proposals (not multilateral) only in areas of Energy, Advanced Manufacturing and the Social Sciences
- Japan JST: Open to Grantees with active awards in the CREST and PRESTO programs

See solicitation for additional details

How to prepare a strong PIRE proposal

Anne Emig

Program Director

PIRE Program Objectives

Excellence in Research	• Support excellence in NSF supported research areas via the international partnership
Unique Opportunities	• Promote opportunities where international collaboration can provide unique advantages of scope, scale, flexibility, or facilities to advance science
Shared Resources	• Engage and share resources and research infrastructure within and across institutions to build strong international partnerships
Students	• Create and promote opportunities for students and early career researchers to participate in substantive international research experiences

Eligibility: Organizations

- Lead Institution
  - U.S. academic institutions with Ph.D.-granting programs that have awarded doctoral degrees in the 2012 or 2013 academic years in any area of research supported by NSF: http://www.nsf.gov/od/iia/ise/2015-PIRE-Eligible-Institutions.pdf
  - If not listed, consult PIRE staff
  - All types of institutions are encouraged as partners
  - There is no limit on the number of proposals in which institutions can participate as partners

Eligibility: People

- Individual
  - There is no limit on the number of proposals in which individuals can participate as partners and collaborators
  - PI, co-PI, other Senior Personnel must be affiliates of U.S. institutions
    - Only PI needs to be from Ph.D.-granting university
    - Partnerships with researchers at wide range of institutions are encouraged
  - Foreign collaborators should be listed as "Foreign collaborators"

Eligibility: Current PIRE Projects

Institutions holding current PIRE awards are eligible to apply only if submitted proposals are significantly different in scope from those previously awarded.

Incremental expansions of funded projects do not qualify and will be returned without review.

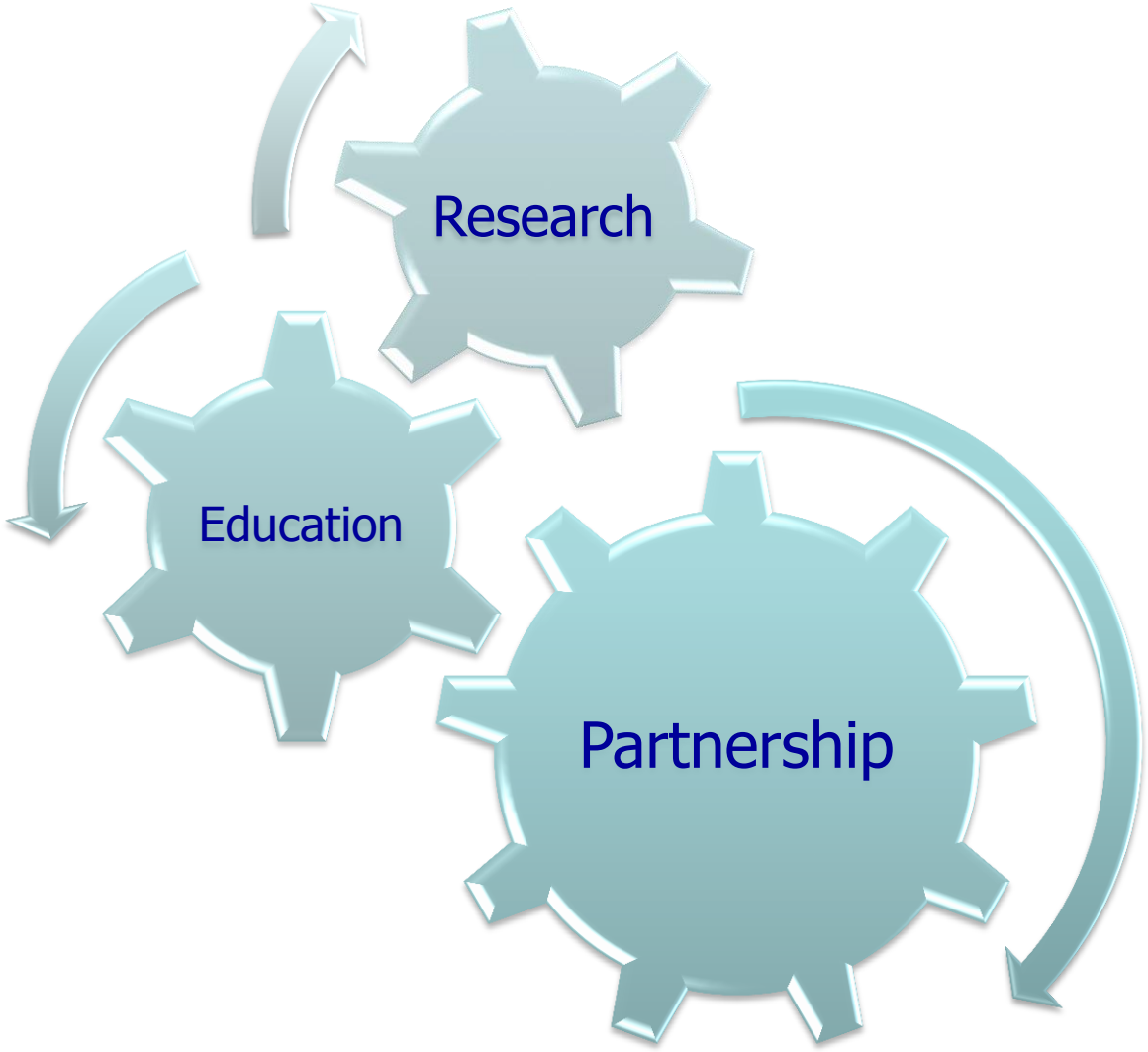
Preliminary Proposals

Concept paper/ Project description	• Maximum length 6 pages
Relevance	• As interpreted by the PI(s) • You explain how your project advances your research area
Cover page	• Budget: $2 • Identify all countries involved
Project Summary	• Should stand on its own • Be understandable to a scientifically literate reader • Intellectual Merit, Broader Impact

Concept Paper/ Project Description

Challenges	• Outline the research challenges being addressed or breakthroughs being sought
Novelty	• Emphasize novelty and/or originality of proposed approaches
Interdisciplinarity	• Proposals that are interdisciplinary in scope are not required but are encouraged
Impacts	• What significant or transformative impacts in science, engineering or education are expected?
Value Added of International Partnership	• How is this research made better by the international collaboration?

PIRE Integrated Project



Project Description: Details

Administrative Summary

- Provide information about project and participants

Research Summary

- Main ideas and essence of the proposed research
- Issues to be addressed within the research focus, overall goals, approaches, expected outcomes, and the synergy that each participant brings to the project

Education Summary

- Goals of education programs and activities, the integration of research and education
- Educational activities should be described in the context of current knowledge of teaching and learning

Important Notes

- The revised NSF **PAPPG**, NSF 14-1, is effective.
- **Cost Sharing:** Inclusion of voluntary committed cost sharing is prohibited.
  - All resources necessary for the project must be described in the Facilities, Equipment and Other Resources section of the proposal.
- **Data Management Plan:** Required within the standing data policy (not required in preliminary proposal).
- **Postdoctoral Researcher Mentoring Plan:** Each proposal that requests funding to support postdocs must include a description of the mentoring activities that will be provided for such individuals (not required in preliminary proposal.

What makes a strong proposal?

Goals

- Address the PIRE program objectives in your proposal

Ideas

- Preliminary proposal stage is about ideas and excitement of your concepts, not implementation

Team

- Provide sufficient details to allow merit review, describe the essence of your project and your research team

Review Criteria: Standard NSF

NSB approved

Intellectual Merit	Broader Impact

Additional

Integration of Research and Education	Integration of Diversity into NSF Activities

Review Criteria: PIRE-specific

- Value Added through International Partnership
- Internationally-Engaged Educational Activities
- Institutional Engagement
- Evaluation and Assessment
- Project Management

Typical Mistakes
in large group proposals

Proposed project is too broad

- Appears overly ambitious, usually lacks important details and specifics
- Difficult to convince reviewers that the goals of the project will be achieved

Proposed project is too narrow

- Appears as an individual PI project or a collection of separate efforts
- Difficult to convince reviewers that group funding is needed

Proposed project is weakly integrated

- Appears as a list of activities rather than a coherent program
- Contributions and benefits of partners are not clear

Review Process

- Pre-proposals to be panel reviewed
  - Augmented by *ad hoc* review as needed
- All proposals will be grouped into disciplinary areas
- All panels will be formed and managed by ISE in partnership with members of the PCC
- Counterpart agency representatives will observe, provide technical expertise, and advise ISE on the process

Selection of Reviewers

- US and International Reviewers
- Mix of researchers from academic, industrial, and national and government institutions
- Panelists will have expertise in
  - Science/engineering/education research area, typically with strong international focus
  - Managing international research projects, group projects with international participation, and/or international student research programs

Resources

- Review PIRE abstracts & project web sites via URLs listed on:
  - **PIRE 4:**http://www.nsf.gov/od/oise/pire-2012-list.jsp
  - **PIRE 3:**http://www.nsf.gov/od/oise/pire-2010-list.jsp
  - **PIRE 2:**http://www.nsf.gov/od/oise/pire-2007-list.jsp
  - **PIRE 1:**http://www.nsf.gov/od/oise/pire-2005-list.jsp
- Looking Beyond Borders: A Project Director's Handbook of Best Practices for International Research Experience for Undergraduates:
  - http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf06204
- Additional Links on PIRE website:
  - http://www.nsf.gov/pire

It’s time for questions

Contact us

- For questions regarding PIRE contact
  PIRE-info@nsf.gov

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