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Connected Systems系列 Indigo技术预览

杨滔

v-tyang@microsoft.com

合作开发部

微软(中国)有限公司

申明

- 本讲座的内容和演示基于Indigo的第一个CTP (Community Technology Preview)版本；随着产品研发过程的不断进行，本讲座中介绍的Indigo技术特性和实现细节等内容可能会发生变化。

Indigo的设计目标

- Indigo的设计目标:在Windows平台上为安全、可靠的面向服务的应用提供统一的编程模式和运行环境
 - 统一的编程模式
 - 互操作性和集成性
 - 高效的面向服务的编程

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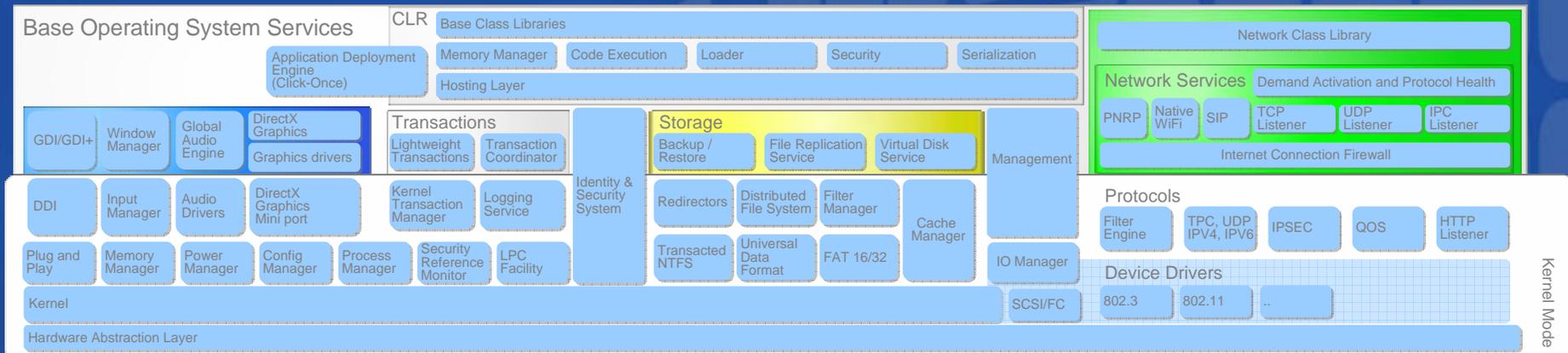
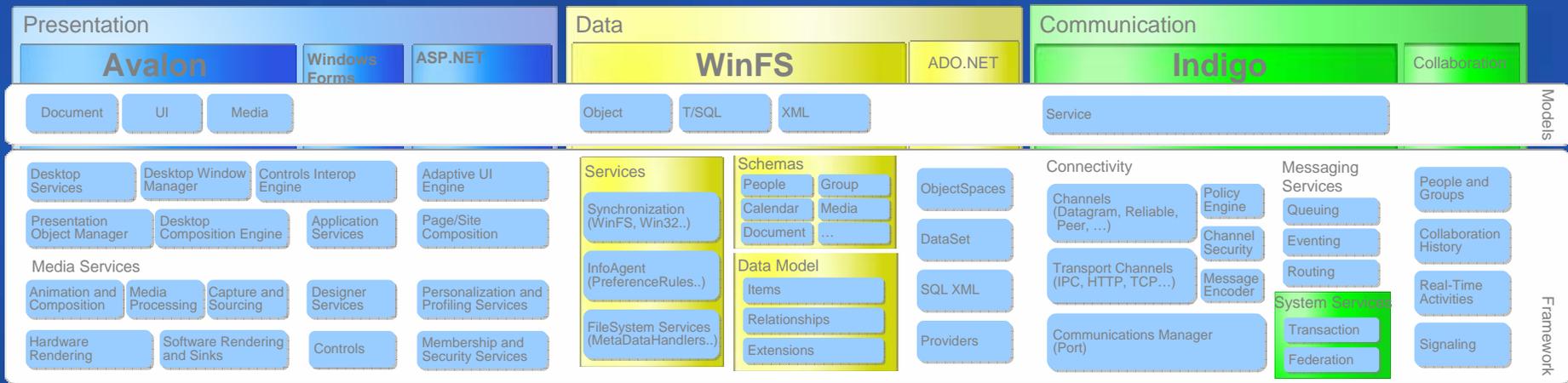
统一的编程模式



Indigo与Longhorn

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Indigo 的架构

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Service Model

Instance
Manager

Context
Manager

Service
Methods

Type
Integration

Declarative
Behaviors

Transacted
Methods

Connector

Channels
(Datagram, Reliable, Peer, ...)

Transport Channels
(IPC, HTTP, TCP...)

Communications Manager (Port)

Policy
Engine

Channel
Security

Message
Encoder

Hosting Environments

ASP.NET

.container

.exe

NT Service

DllHost

Messaging Services

Queuing

Routing

Eventing

...

System Services

Transaction

Federation

...

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<http://msdn.microsoft.com/longhorn/default.aspx>

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Product Information

Microsoft® Windows® Code-Named "Longhorn" Developer Center

Beginning a technology wave that will define the digital decade



[Programming Indigo: The Programming Model](#)

In a chapter from his upcoming book, David Pallmann describes the Indigo programming model for building service-oriented applications.

Microsoft® Pre-Release Software Code Named "Avalon" and "Indigo" Beta1 RC

[+ Genuine Microsoft Software](#)

[Download](#)

Please click **Download** to download the software.

File Name:	winfxsetup.exe
Version:	2.0.50215.28
Date Published:	5/24/2005
Language:	English
Download Size:	2223 KB
Estimated Download Time:	6 min @ <input type="text" value="Dial-up (56K)"/>

FREE

Quick Description

Microsoft has provided a version of the Avalon and Indigo Beta1 "RC" for the general public.

On This Page

- [↓ Overview](#)
- [↓ System Requirements](#)
- [↓ Instructions](#)
- [↓ Similar Downloads](#)

Related Resources

- [• Longhorn Developer Center Home:](#)

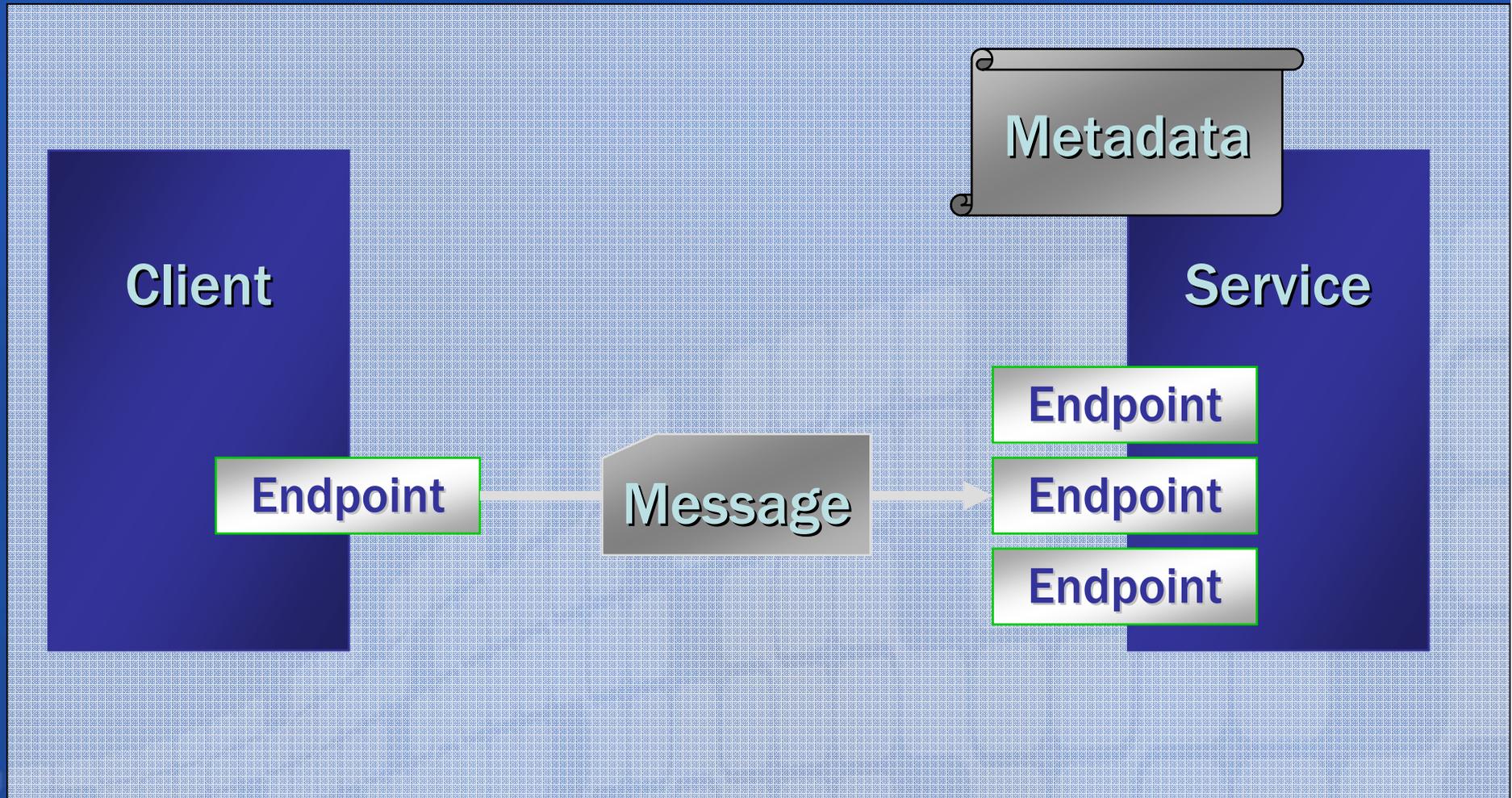
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Services and Clients

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Endpoints

Address

Binding

Contract

Where?

How?

What?

Bindings' Structure

Layer	Options	Required
Context Flow	ContextFlowBindingElement	No
Reliability	ReliableSessionBindingElement	No
Security	SecurityBindingElement	No
Transport	TCP, Named Pipes, HTTP, HTTPS, MSMQ, Custom	Yes
Encoding	Text, Binary, MTOM, Custom	Yes

Binding

预先定义的Binding方式

Binding	Description
BasicProfileBinding	A binding that is suitable for talking to WS-Basic Profile conformant Web Services (for example, ASMX-based services). This binding uses HTTP as the transport and Text/XML as the message encoding.
WsProfileBinding	A secure, reliable, interoperable binding that is suitable for non-duplex service contracts.
WsProfileDualHttpBinding	A secure, reliable, interoperable binding that is suitable for duplex service contracts or communication through SOAP intermediaries.
NetProfileTcpBinding	A secure, reliable, optimized binding suitable for cross-machine communication.
NetProfileDualTcpBinding	A secure, reliable, optimized binding that is suitable for cross-machine communication through SOAP intermediaries.
NetProfileNamedPipeBinding	A secure, reliable, optimized binding that is suitable for on-machine communication.
NetProfileMsmqBinding	A queued binding that is suitable for cross-machine communication.
MsmqIntegrationBinding	A binding that is suitable for communicating with existing MSMQ applications.

组合性(Compatibility)

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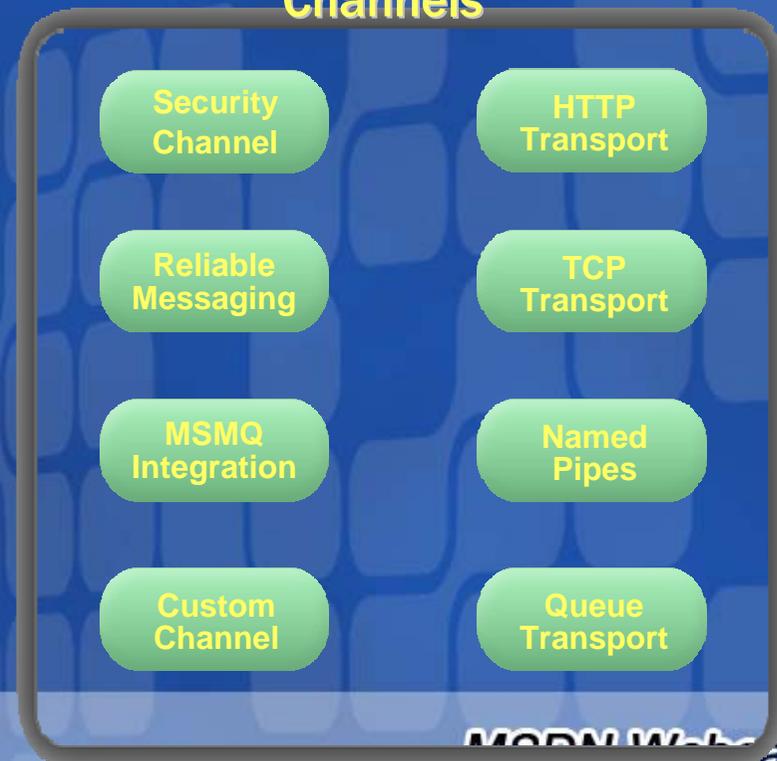
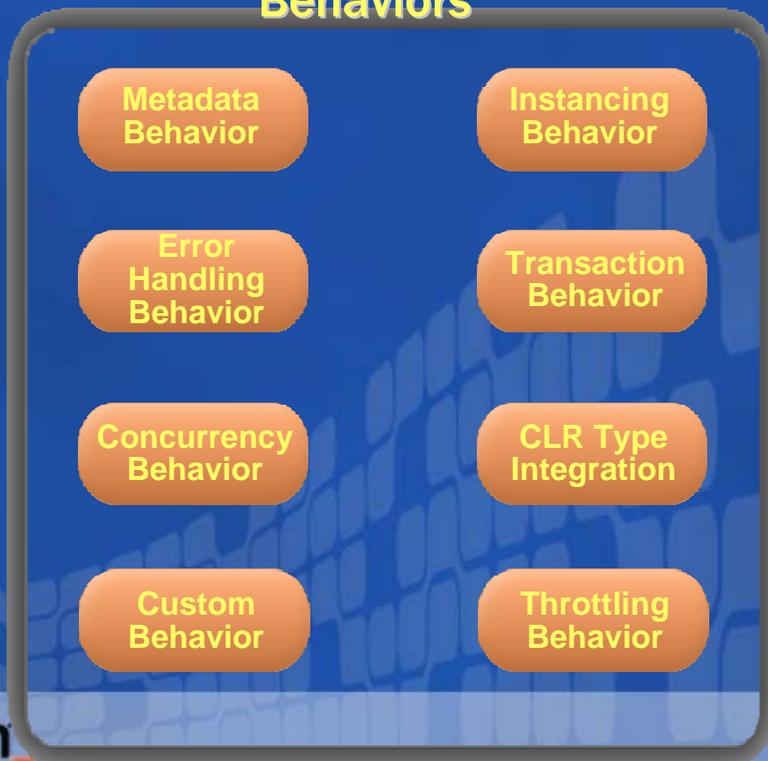
Service Model Layer

Messaging Layer



Behaviors

Channels



The Four Tenets of Service-Orientation

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**Boundaries
are Explicit**

Developers opt-in to consuming, exposing, and defining public-facing service façade.

**Services are
autonomous**

Services and consumers are independently versioned, deployed, operated, and secured.

**Share schema &
contract, not class**

Data never includes behavior;
Objects with data and behavior are a local phenomenon.

**Compatibility
based on policy**

Capabilities and requirements represented by a unique public name;
Used to establish service suitability.

Integration

Leveraging Existing Microsoft Investments

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- Side-by-side co-existence with existing distributed technologies
- Seamless communication with applications built on existing technologies
- Smooth upgrade of existing code to Indigo

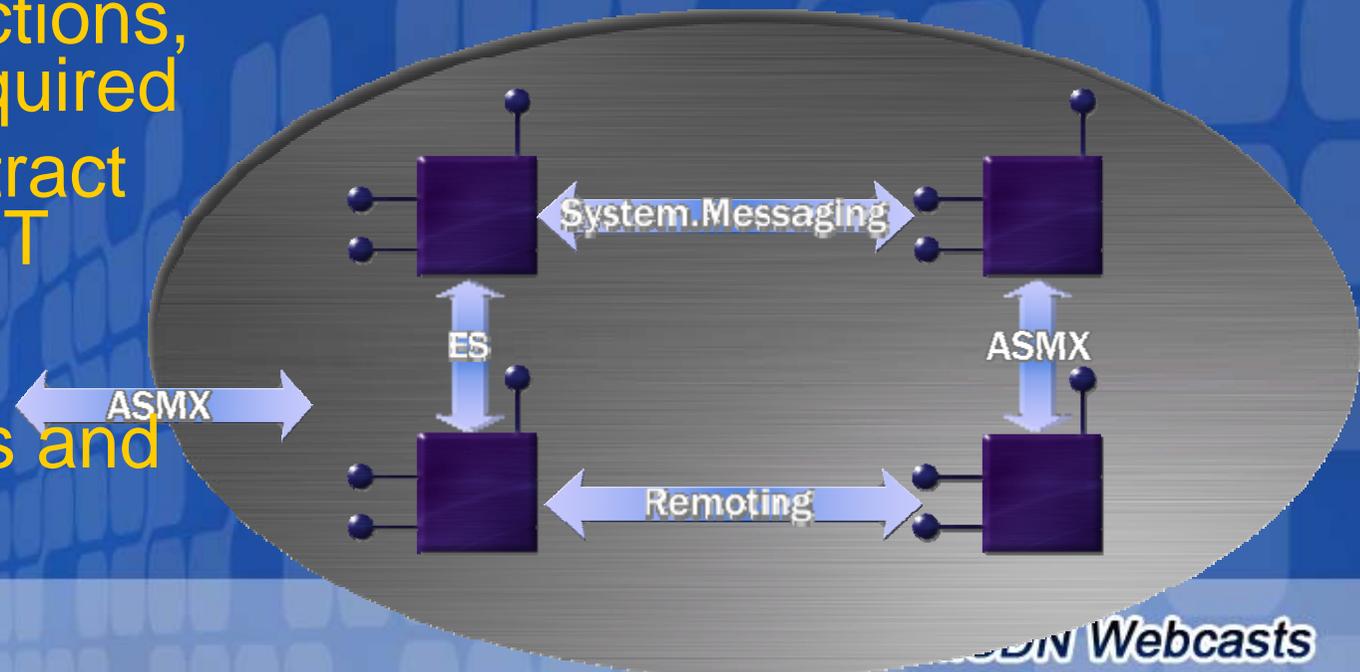


Designing for Indigo

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- Build services using ASMX
- Use WSE for WS-* support
- Keep components within your service boundaries
- Use System.Messaging for async queued messaging
- Use Enterprise Services when transactions, activation required
- Avoid or abstract low-level .NET Remoting extensibility such as sinks and channels



资源

- **Indigo in Longhorn Center**

<http://msdn.microsoft.com/Longhorn/default.aspx>

- **Indigo in MSDN Library**

<http://msdn.microsoft.com/library/>

– *Introducing Indigo: An Early Look by David Chappell*

- **WINFX SDK DOC**

<http://winfx.msdn.microsoft.com/library/>

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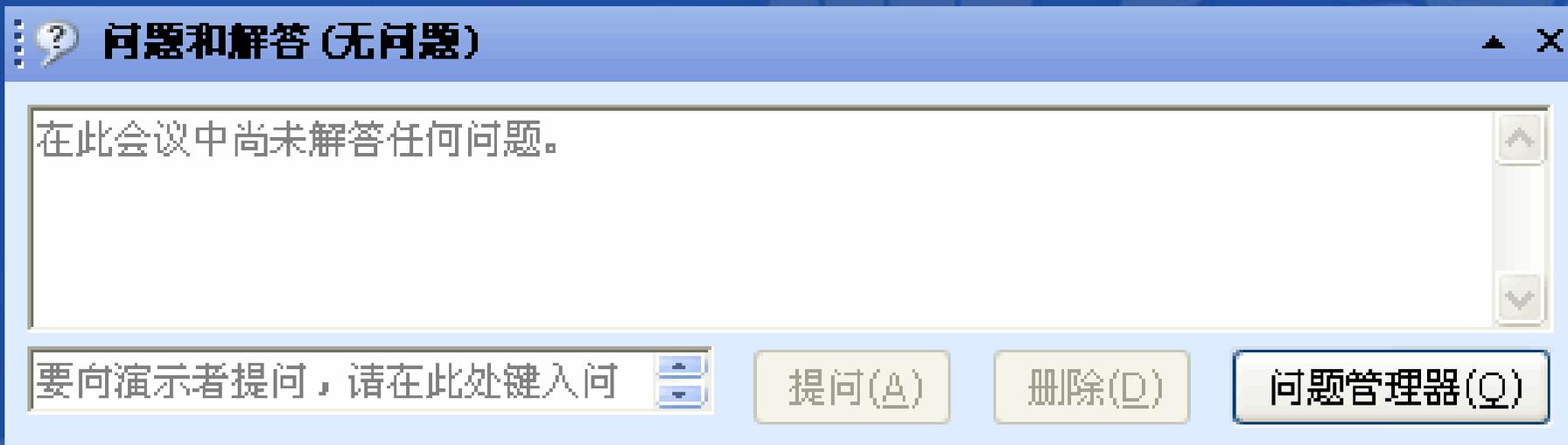
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Q & A

如需提出问题，请单击“提问”按钮并在随后显示的浮动面板中输入问题内容。一旦完成问题输入后，请单击“提问”按钮。



The screenshot shows a window titled "问题和解答 (无问题)" (Questions and Answers (No Questions)). The window contains a text area with the message "在此会议中尚未解答任何问题。" (No questions have been answered in this meeting yet.). Below the text area are three buttons: "提问(A)" (Ask Question), "删除(D)" (Delete), and "问题管理器(Q)" (Question Manager). There is also a small input field with the placeholder text "要向演示者提问，请在此处键入问" (To ask a question to the presenter, enter the question here).