# A Methodology to Define QoS and SLA Requirements in Service Choreographies

#### **Authors**

Victoriano Alfonso Phocco Diaz Daniel Macêdo Batista

Institute of Mathematics and Statistics
Departament of Computer Science
University of São Paulo

alfonso7@ime.usp.br, batista@ime.usp.br

September 17, 2012

# Agenda

- Introduction
- 2 Basic Concepts
- Methodology
- 4 Performance Evaluation
- **5** Conclusions and Future Works

- Introduction
- 2 Basic Concepts
- Methodology
- Performance Evaluation
- 5 Conclusions and Future Works

Objetives



•

#### Problem

• Planning of resources before/during development of choreography.

#### Problem

- Planning of resources before/during development of choreography.
- Contratos probabilísticos refletem melhor o comportamento dinâmico dos atributos de QoS.

#### **Justification**

• Planning of resources before/during development of choreography.

#### Justification

- Planning of resources before/during development of choreography.
- QoS is a important factor for adaptation, selection, otimization, service composition into SOC.

- Introduction
- 2 Basic Concepts
- Methodology
- Performance Evaluation
- 5 Conclusions and Future Works

# Web Service

•

#### Service Orchestration

# What is service choreography?

### Coreografia de Serviços

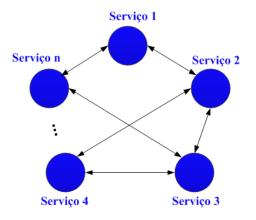


Figure: Service Choreography

## Quality of Service

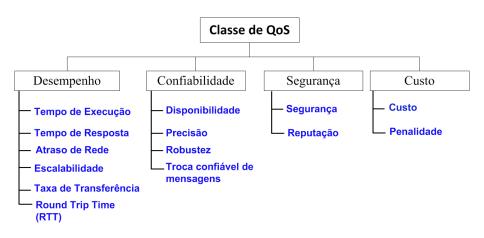


Figure: Taxonomia de atributos de QoS [Rosenberg et al.,2006]



Rosenberg F, Platzer C, Dustdar S. Bootstrapping Performance and Dependability Attributes of Web Services. IEEE International Conference on Web Services (ICWS'06), 2006:205-212.

# Process Choreography

# BPMN and Choreography

# Example

- Introduction
- 2 Basic Concepts
- Methodology
- Performance Evaluation
- 5 Conclusions and Future Works

# Description

# Choreography Formalization

# QoS Model

# Mapping BPMN to Petri Net (I)

# Mapping BPMN to Petri Net (II)

# Mapping Algorithm

- Introduction
- 2 Basic Concepts
- Methodology
- 4 Performance Evaluation
- Conclusions and Future Works

# Scenario

# Mapping

# Configuration

# Simulation

## Results

- Introduction
- 2 Basic Concepts
- Methodology
- Performance Evaluation
- **5** Conclusions and Future Works

#### Conclusions

 We have prosposed a Nobel methodology to aid define QoS and SLA requirements in service Choreography.

#### Conclusions

 We have prosposed a Nobel methodology to aid define QoS and SLA requirements in service Choreography.

#### **Future Works**

#### **Future Works**

Thanks so much!