



International Federation
for IT and Travel & Tourism

the eTourism community

Information and Communication Technologies in Tourism



Dynamic Packaging of Tourism Products and Services

- **Dynamic Packaging in Tourism**
- **Basic Composition Mechanism**
- **A Dynamic Packaging Architecture**
- **Case study Flexpackage.com**

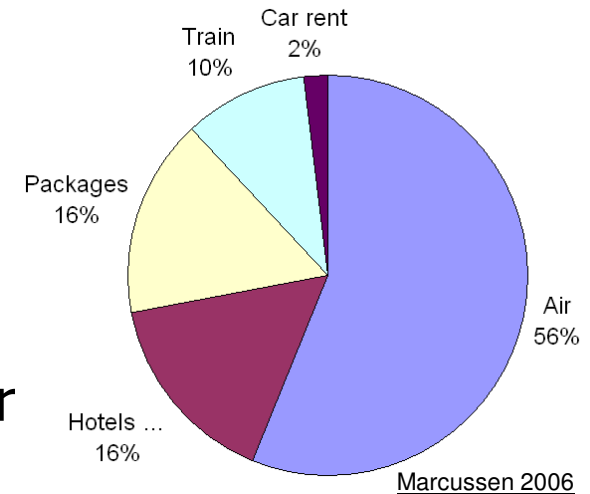
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Dynamic Packaging in Tourism

■ Motivation of dynamic packaging

- Travel packages play an important role in tourism
- Consumers prefer to create their **own packages** rather than purchase pre-packaged tours
- No support for **dynamically composing** single products to travel packages
- Different types of tourism services are often only available on **different** online platforms



Dynamic Packaging in Tourism

■ Components of dynamic packaging

- Individual consumer search request
- Ability to combine multiple travel components (typically air, car and hotel) in real time
- Integration of services from different sources (dynamic sourcing)
- A single, dynamically priced package (hiding the pricing of individual components) (dynamic pricing)
- Booking of complete travel package in real time

Dynamic Packaging Requirements

■ Customer requirements

- Adaptation and personalisation of bundeling process depending on customer profile
- Ensuring combinability of services
- Recommendation of optimal travel packages or additional services to existing travel itinerary

■ Supplier requirements

- Yield & capacity management
- Consideration of business rules and constraints for building travel packages
- Comfortable, flexible definition process

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Departing on

Duration (nights)

UK airport

Resort airport

Destination / Resort

Hotel name (optional)

No. of rooms

How many staying in

Adults
 Children
 Infants

Room 1

Please Note: Infants are under 2 years old on return date of travel

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ICT in Tourism

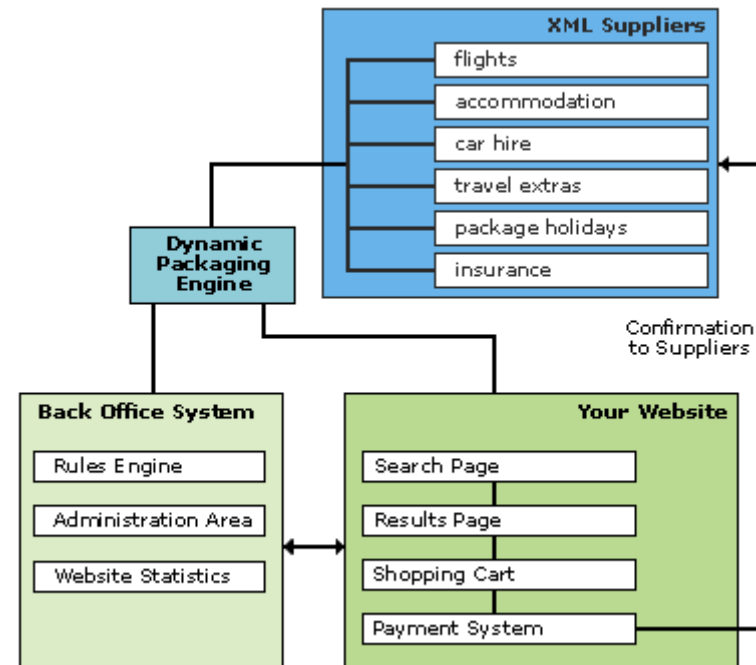
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Supplier of dynamic packaging functionality

- Dynamic packaging functionality can be integrated into customers website
- Dynamic packaging engine provides XML feeds from different suppliers

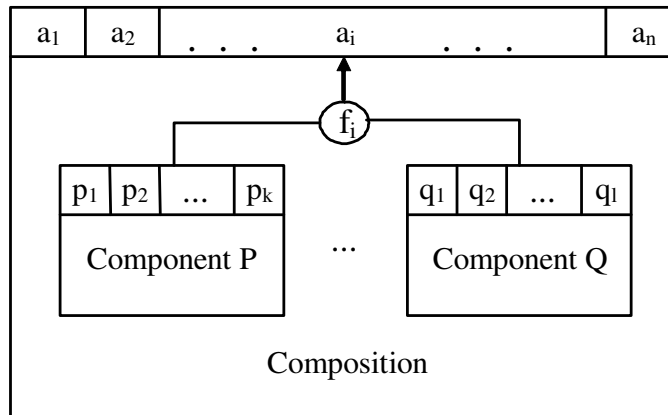


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Basic Composition Mechanism

Composition mechanism



An attribute a_i of the composition is evaluated by:

$$a_i = f_i(p_1, \dots, p_k, \dots, q_1, \dots, q_l)$$

with p_i attribute of component P
and q_i attribute of component Q

Höpken 2000

- Bundling of several tourism services, characterised by a set of attributes, to a composition service, again characterised by a set of attributes
- Attribute values of a composition service are evaluated from the attribute values of the components being part of the composition

Structure of a Composition

■ Degree of freedom of a composition

- **Fix** supplier-initiated composition
- supplier-init. composition with **choices**
- customer-initiated composition

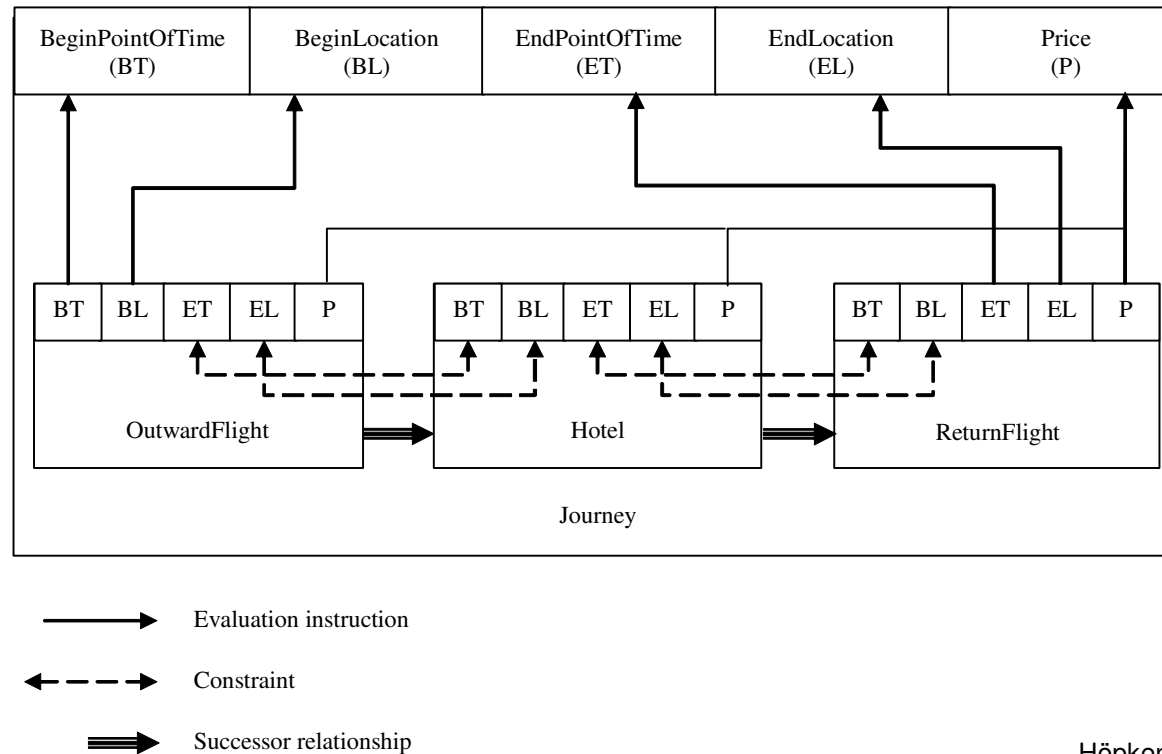


degree of freedom

■ Structure of a composition

- **Components**
 - A **set** of tourism services
 - A **role** within the composition, defined as it's relationships to other components
- **Attributes** evaluated by evaluation instructions
- **Evaluation instructions** enabling the dynamic calculation of attribute values out of the attributes of the contained components
- **Constraints** enabling to restrict the combination possibilities within a composition and refer to the attributes of the contained components

Basic Composition Mechanism



Höpken 2000

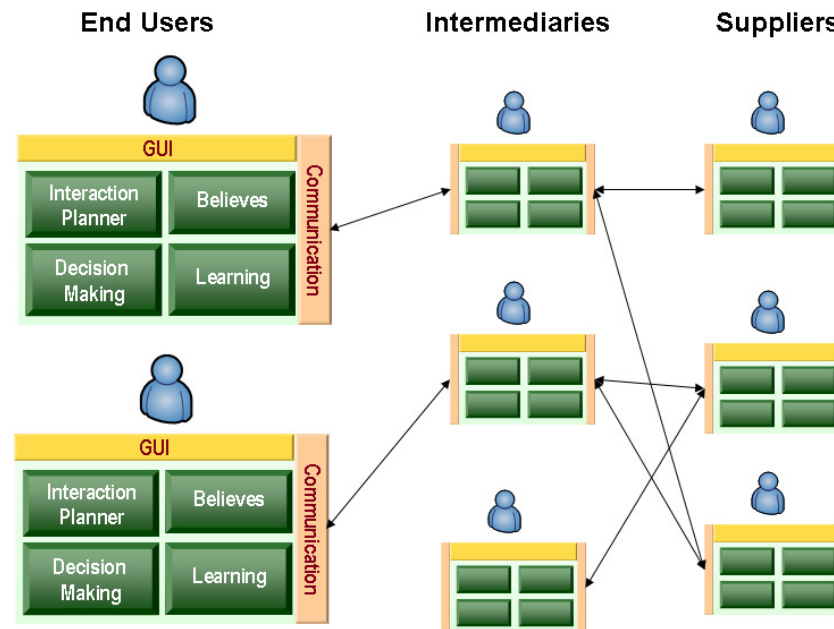
- Basic interface provides all attributes, relevant for the composition of services, in a uniform way
 - Attributes describing the **begin** & **end** state concerning the dimension **location** and **time**

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A Dynamic Packaging Architecture

Agent-based dynamic packaging network

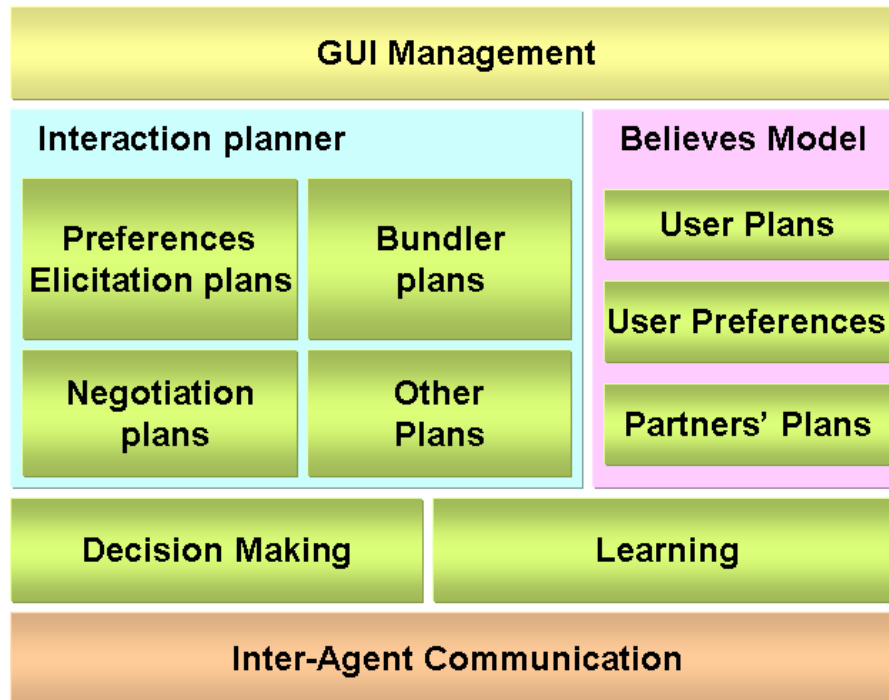


Ricci et al. 2003

- Users access a network of intermediaries/suppliers
- Intermediaries/suppliers offer services, evtl. by bundling services, and partially delegate requests to other intermediaries/suppliers

A Dynamic Packaging Architecture

Agent Structure



- Interaction planner: Executes conversation/interaction plans
- Believe model: Creates and manages hypothesis on the behavior and preferences of the user and of the other agents
- Decision making: Supports decision making in a multi-agent network
- Learning: Learning of user models and negotiation strategies

Ricci et al. 2003

A Dynamic Packaging Architecture

- **Multiple travel bundling strategies**
 - **Single iterative** product selection from catalogues
 - Recommendation by **proposal**
 - tweaking by critiquing
 - Selection of a **complete** package
 - **fixed** or simple **customisable** packages provided by suppliers
 - Completion of a **partial** package
 - fulfilling open user goals or completing to a typical package
 - **Flexible customisation** of a package
 - user navigation within a space of alternatives
 - Completely **dynamic bundling** of a package starting from elementary products

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flexpackage

Buchen Sie doch was Sie wollen!

Kontakt



Termin	▼	✓
Zimmer	▼	✓
Verpflegung	▼	✓
Extras	▼	
Wellness	▼	
Massage	▼	
Beauty	▼	✓
Golf	▲	✓
▲▼	1	18-Loch Greenfee Mo-Fr
▲▼	0	18-Loch Greenfee Sa, So, Fe
▲▼	1	Trolley
▲▼	0	3er Golf-Alpin-Pass
▲▼	0	E-Cart für 18 Loch
▲▼	0	Sunset-Greenfee

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zurücksetzen ►

Ihr persönliches Package: ▲

22.1.2007 - 24.1.2007

Doppelzimmer Deluxe
2 Personen

2 x Vollpension pro Person
1 x Maniküre
2 x Pediküre
1 x 18-Loch GF Mo-Fr
1 x Trolley

Kostenloser Bonus

1 x Maniküre

Inkludierte Gebühren

Kurtaxe

Regulärer Preis: 664.40

Ihr Preis: 598.20










Package
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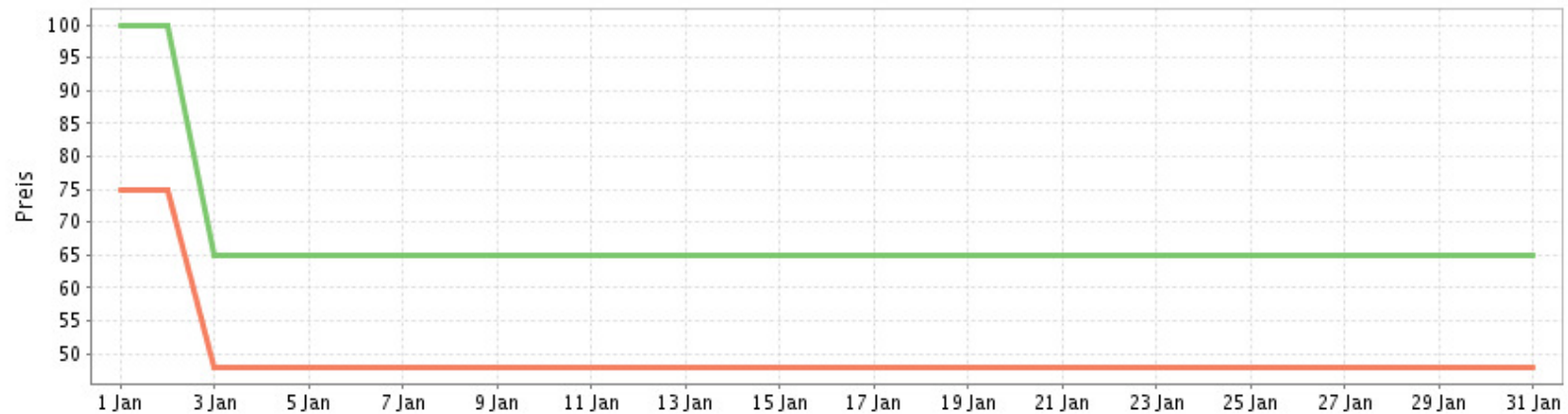
Package
drucken

(c) www.flexpackage.com

Doppelzimmer inkl. Frühstück » Preisregeln

 Listen- und Mindestpreis	 Ermässigung Kinder / Zustellbetten (1)	 Nächtigungs-Zugaben (2)
 Einzelzimmerzuschlag (4)	 Nächtigungs-Reduktion (2)	
 Einmalgebühren pro Aufenthalt (1)	 Wochentags-Reduktionen (2)	
 Zusatzgebühren pro Person (3)		 Mindestaufenthaltsstage

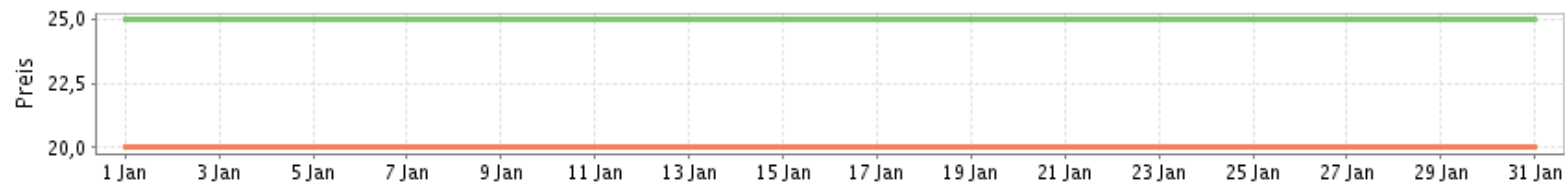
1 Monat | 6 Monate | 12 Monate | aktuelles Jahr  01.01.2007 - 01.02.2007  



[zurück](#)

Teilmassage » Preisregeln » Listen- und Mindestpreis

1 Monat | 6 Monate | 12 Monate | aktuelles Jahr | 01.01.2007 - 01.02.2007



Listenpreis pro Person

	Für nicht definierte Zeiträume	25,00 EUR
	01.07.2007 - 31.08.2007	22,00 EUR

Mindestpreis pro Person

	Für nicht definierte Zeiträume	20,00 EUR
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Mengen-Reduktion

	01.05.2007 - 31.08.2007	Rabatt ab 5 Teilmassagen	≥ 5	10,0 %
	01.03.2007 - 30.04.2007	Rabatt ab 5 Teilmassagen	≥ 5	5,0 %

Mengen-Zugabe

	01.05.2007 - 31.08.2007	8. Teilmassage kostenfrei	≥ 7	1 x	Teilmassage
	01.03.2007 - 30.04.2007	10. Teilmassage kostenfrei	≥ 9	1 x	Teilmassage