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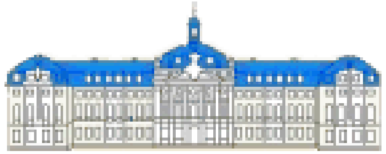

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und Interorganisationssysteme
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Electronic Business Industry Impact

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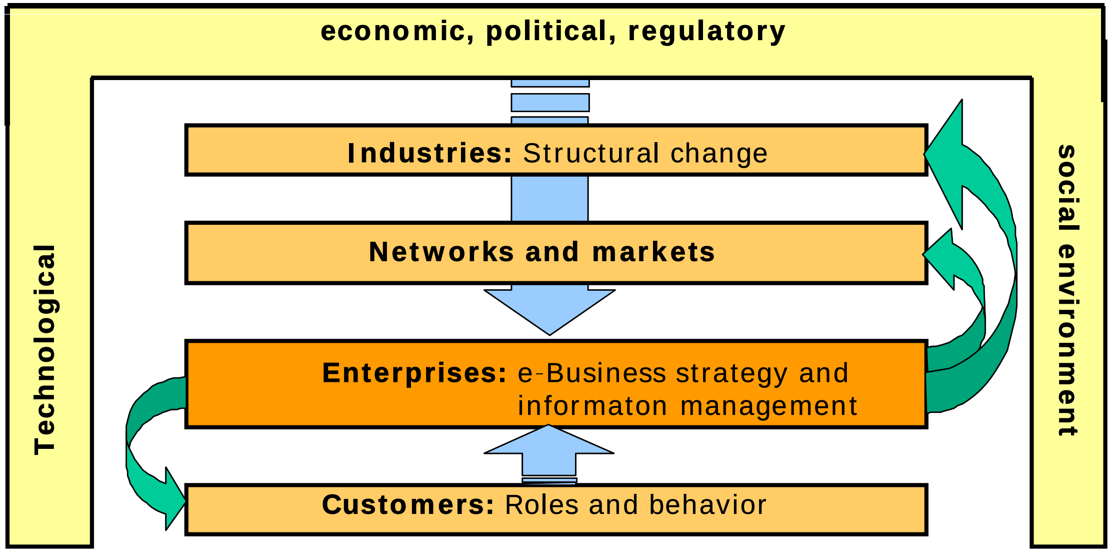
Module Outline

- E-Business impact on tourism industry



- Goals
  - Understand industry contingencies
  - Look out for dominant design patterns
  - Link to theoretical issues

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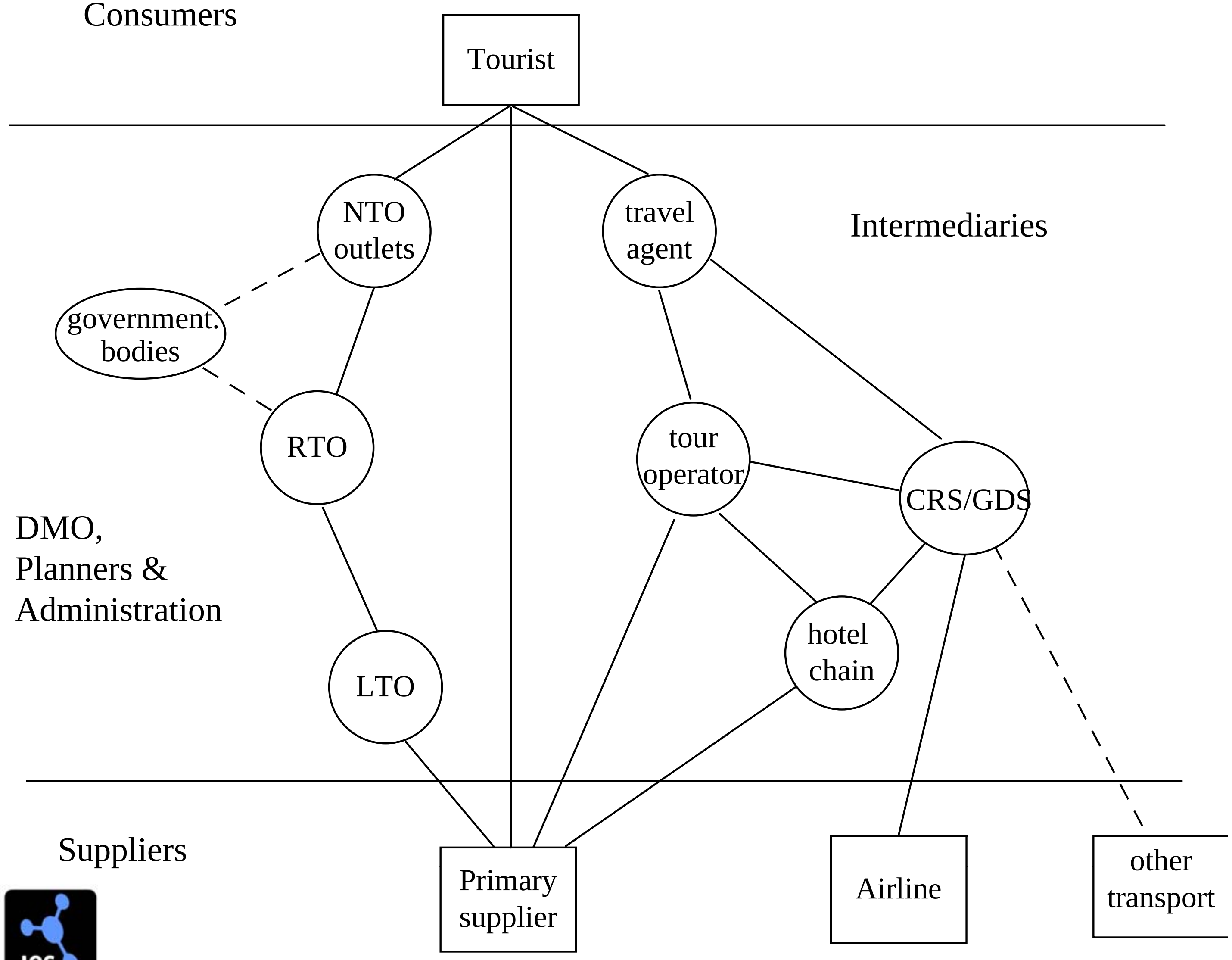
Outline

- Move-to-the-market and disintermediation/ cybermediation debate
- Some evidence from the scheduled airline ticket, the new car and the consumer electronics markets
- Interpretation, open issues, conclusions

Tourism market structure



Source: Werthner; Klein 2000

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Contingencies: Product and Service Features

- Tickets are **non-transferable contracts**,
- high level of fixed cost, **low marginal cost** per passenger (about 13% of the overall cost),
- high level of **differential pricing** (up to 20 different booking classes are defined for a single flight in which only two (or three) service classes.
- The **product spectrum** is a continuum between:
  - comprehensive offerings of the big international airlines or airline alliances with millions of possible routes in a hub & spoke network, connections to the main metropolitan airports, and complimentary inflight service and
  - smaller, mostly independent airlines which offer a limited number of direct connections, often to smaller airports and in most cases no complimentary inflight service in return for aggressively priced tickets

Impact of the Web

Overall expectation: the Web is going to become a major channel because of

- the salience of **rich and topical information** for customers,
- tourism suppliers address a **global audience** and almost every Internet user is a potential customer,
- **intense competition on the Web** among incumbents and new players has led to the emergence of numerous leading Web sites, which offer a wealth of multi-media information and efficient transaction support.

The dynamics of market structure changes: Some evidence

First act:

Airlines sell direct

and change the rules of the game, e.g. auctions and commissions

discontinued

Success rates of online direct sales

While Lufthansa achieved a direct sales ratio of 7-8% in 1999 and forecasted 14% for 2003, other players are doing far better: Southwest sold 27% online in January 2000, and easyJet ...

12 December 2000

passenger and Internet statistics, November 2000

Below are the easyJet passenger and Internet statistics for November 2000. This information will be published on a monthly basis.

	November 2000	November 1999	12 months ending 30 November 2000
Passengers(1)	498,796	374,703	5,887,402
Load Factor(2)	80.0%	76.3%	81.5%
Internet Sales Percentage(3)	79.4%	50.0%	69.5%

How would you explain the success in online sales?

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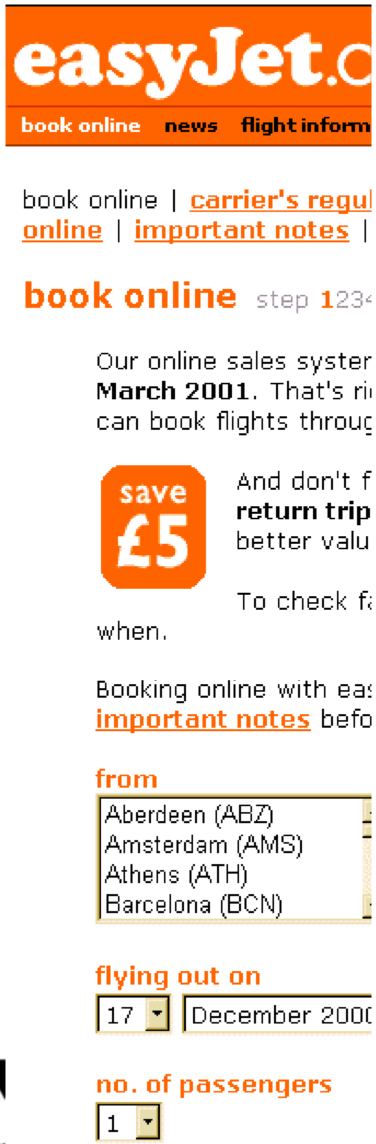

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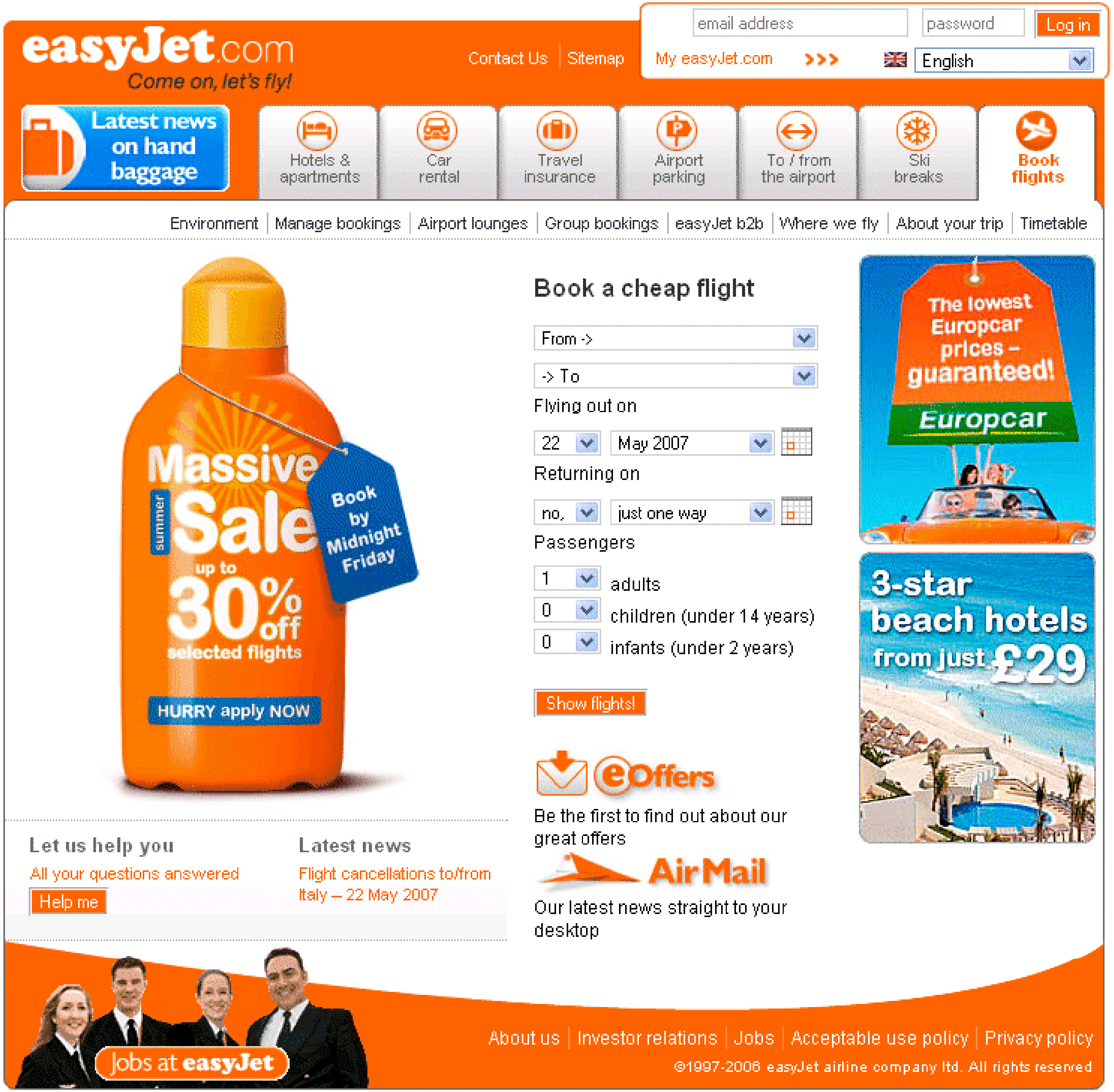

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The dynamics of market structure changes: Second act

CRS/GDS build online travel supermarkets for consumers

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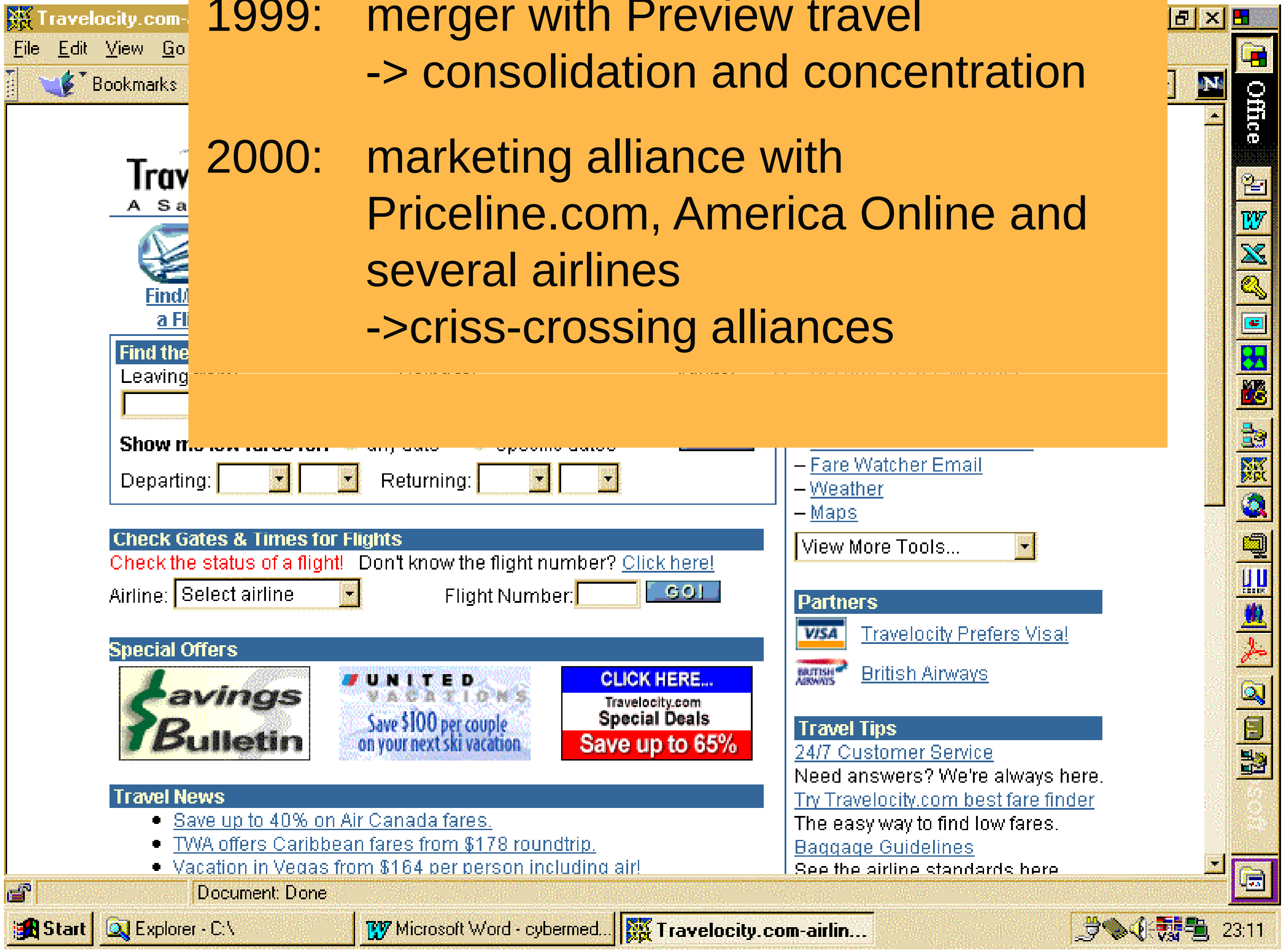
Second act: New Web-based roles for intermediaries (2): CRS/GDS

CRS/GDS build online travel supermarkets for consumers

1999: merger with Preview travel
-> consolidation and concentration

2000: marketing alliance with Priceline.com, America Online and several airlines
->criss-crossing alliances



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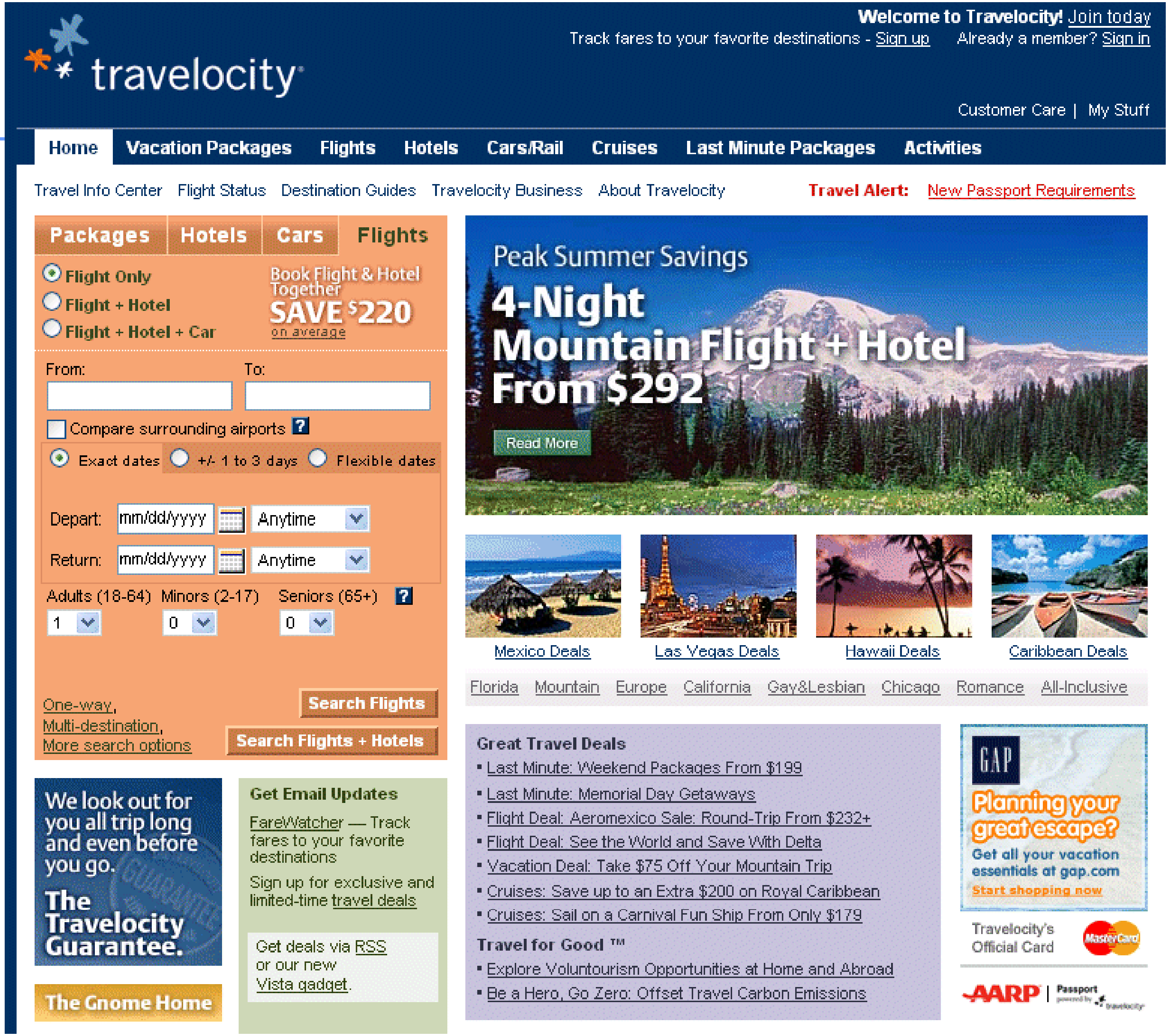
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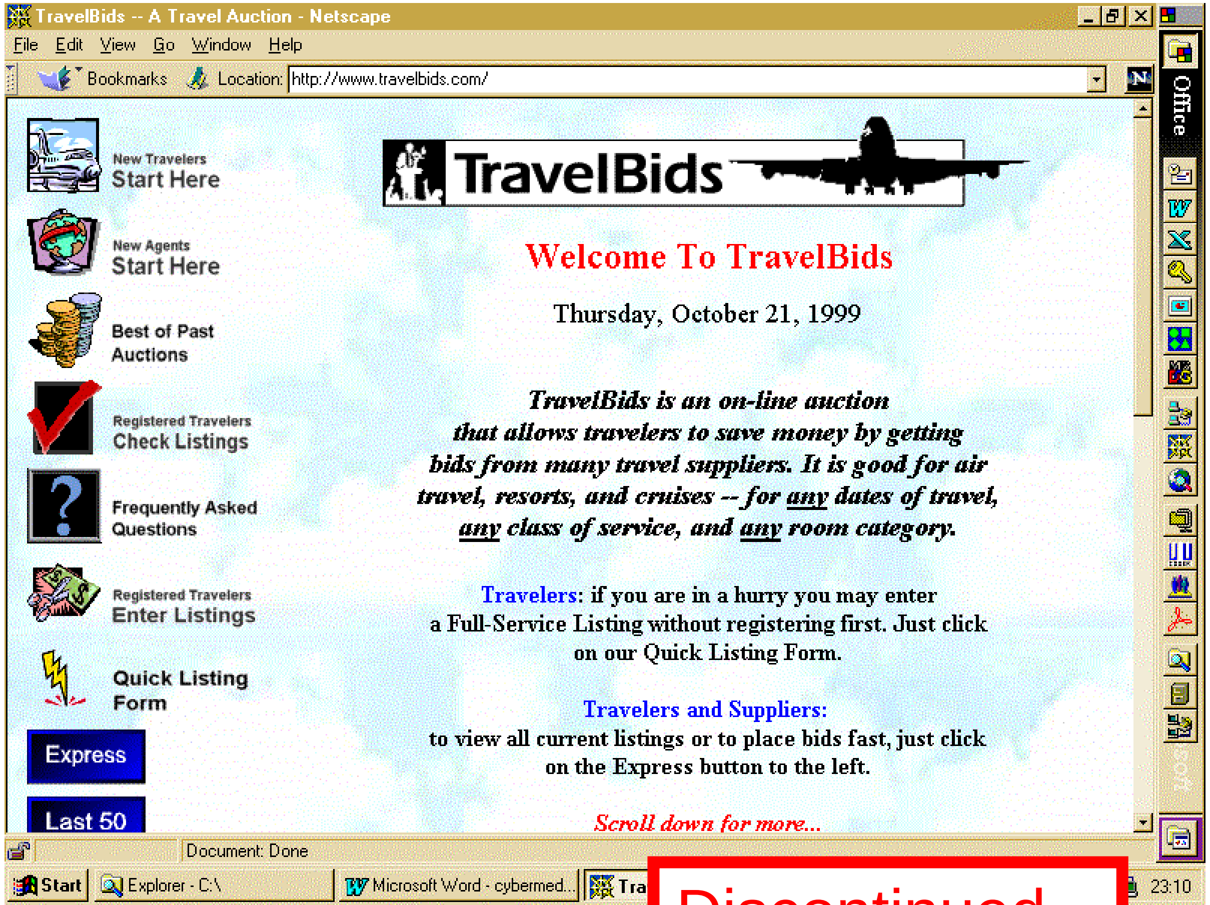
The dynamics of market structure changes: Third act

New players, so called cybermediaries, position themselves prominently as consumers‘ advocates with innovative pricing models (demand collection, demand aggregation, reverse auction)



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Intermediaries’ functions and value propositions

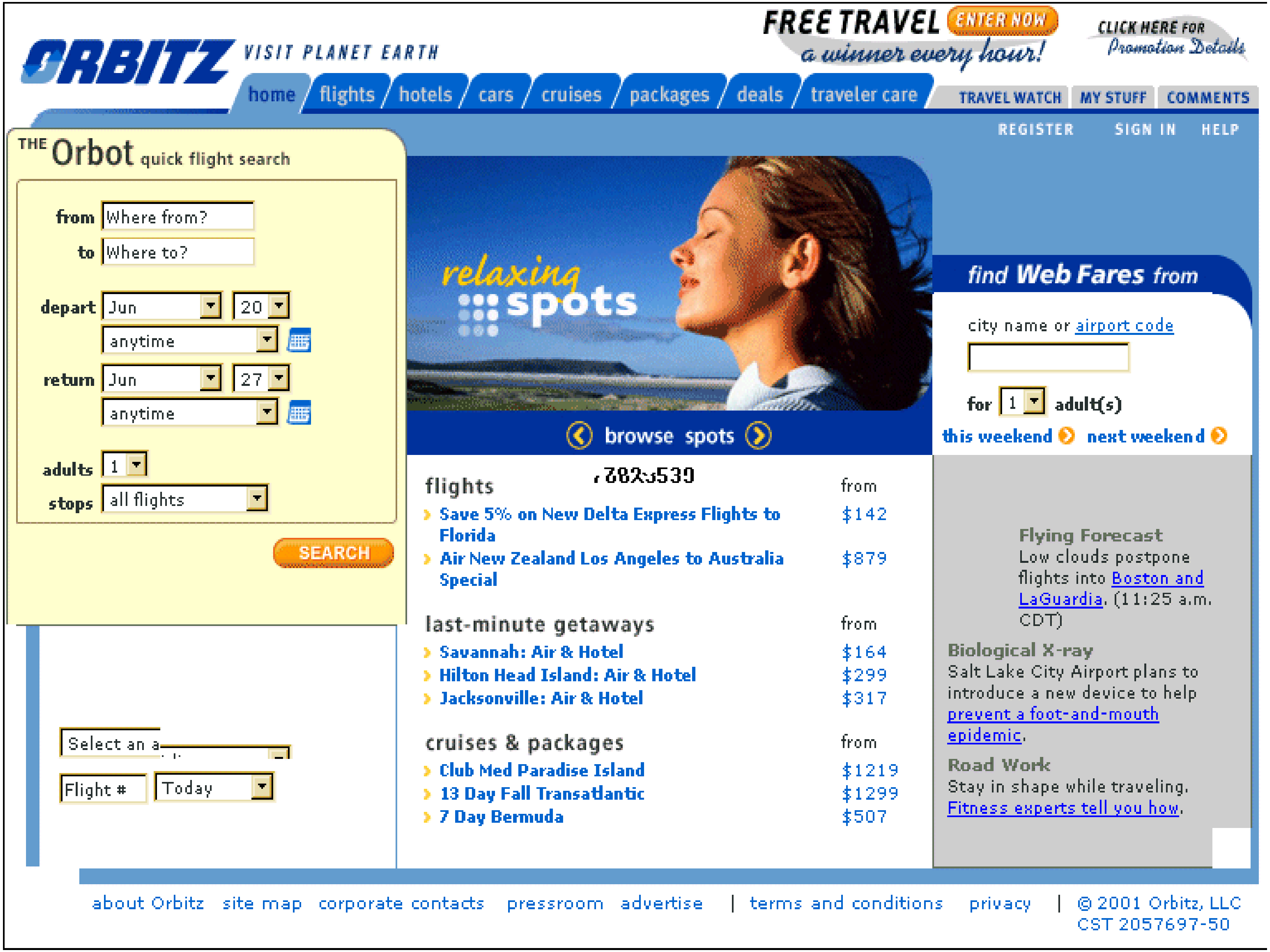
- information services, such as price and product comparisons **-> information costs**
- efficient coordination of exchange relations, e.g. demand collection and aggregation **-> allocation costs**
- balancing suppliers’ interest and customer needs, often focusing on the role as **consumers’ advocate**
- adding distinctive value, typically based on the potentials of the Web, e.g. innovative **cooperation models**
- specific exchange institutions such as trust and credibility mechanisms **-> extended value propositions**.

The dynamics of market structure changes: Fourth act

Wall Street Journal: Airlines Co-operate to Win Online Market Share

Apr 14 2000: Twenty-seven airlines have joined together to establish a new one-stop-shop reservations site in a bid to compete aggressively online with existing sites such as Travelocity and Priceline.com.

- 11 European Airlines are pursuing a similar strategy (online travel marketplace ‘Otopenia’)
- The airlines’ move can be interpreted as an imitation of the CRS’ online strategy and is motivated by high costs of tourism Web sites and assumptions about customer preferences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Low clouds postpone flights into Boston and LaGuardia. (11:25 a.m. CDT)
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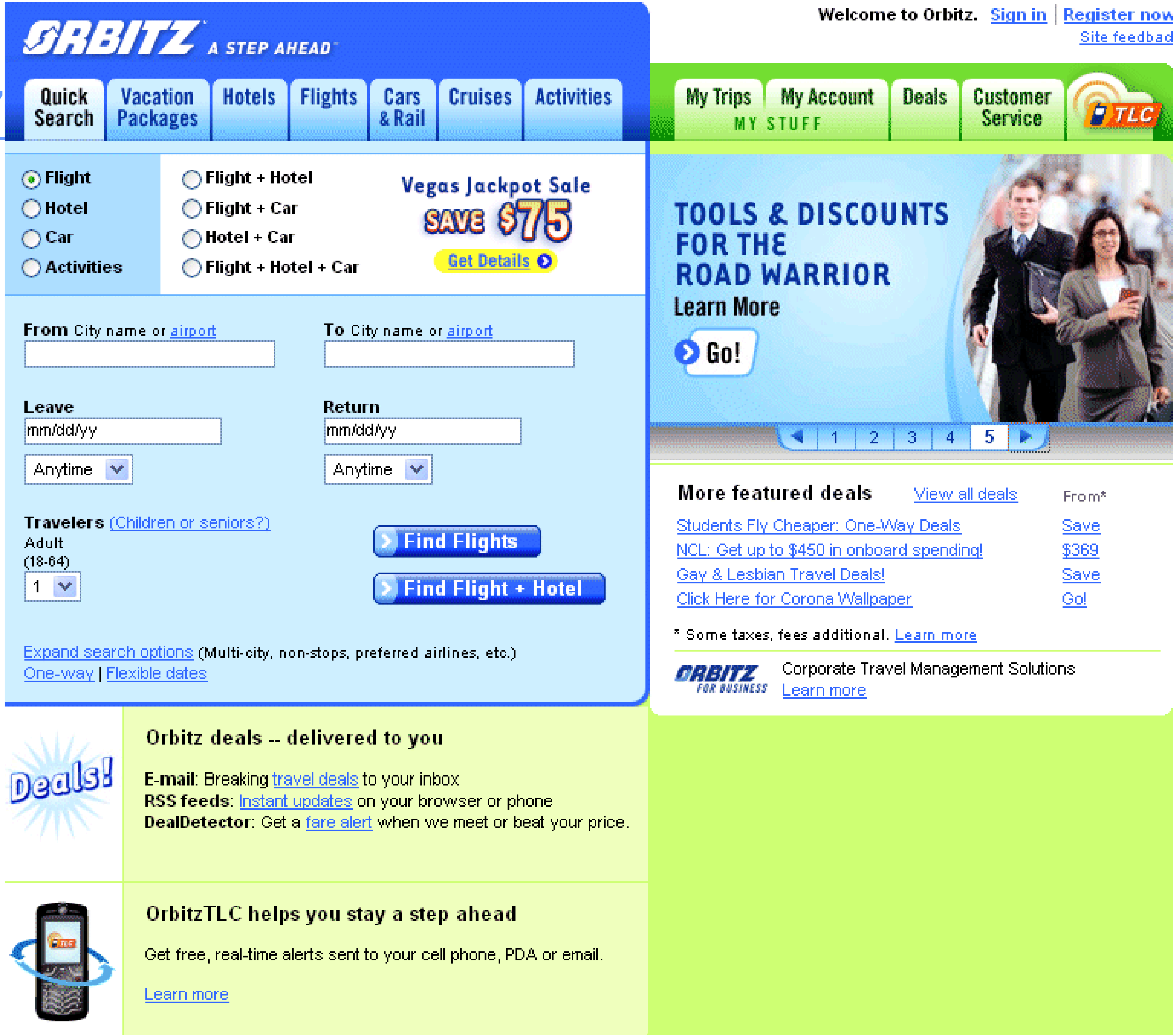

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Predatory disintermediation ?

- The announcement has not been well received in all quarters. The **American Society of Travel Agents (ASTA)** has demanded an investigation into the planned site from the Justice Department. ASTA says the site would offer an ‘opportunity’ for collusion on pricing.
- ALEXANDRIA, VA, April 13, 2000 - The **Coalition for Travel Industry Parity (CTIP)** has sent a letter to the Attorney General of the Department of Justice's Anti-Trust Division announcing that it fully supports the complaint filed by the American Society of Travel Agents (ASTA) regarding the proposed 27-airline joint Web site.
- The **German Travel Agents Association** (Deutsche Reisebüro- und Reiseveranstalter-Verband) has asked the federal anti-trust agency (Bundeskartellamt) to check the announced alliance.

Options for travel agents?

Biztravel.com ... a Rosenbluth company

biztravel.com Features

FareGuard

It's happened to everyone: you book a flight and then you hear about a significantly cheaper fare on the same route. With most web sites and travel agencies, you'd never even hear about the lower fare - and the money you could save. But you'll never experience that frustration again when you book a flight on biztravel.com thanks to our new patent-pending technology, FareGuard .

How does FareGuard work? After you book a flight, our exclusive FareGuard technology will automatically check the reservation system for cheaper fares every day until the day before your sche

Does FareGuard only check for
FareGuard will even identify cheap
alternate times on the same day y

What about fees for changing ti
will take into account all change o
flights will save you $25 or more af

How will I be notified? We will e
This e-mail will also tell you how to
so.

Will you rebook me automatica
your permission.

Is this service available for all a

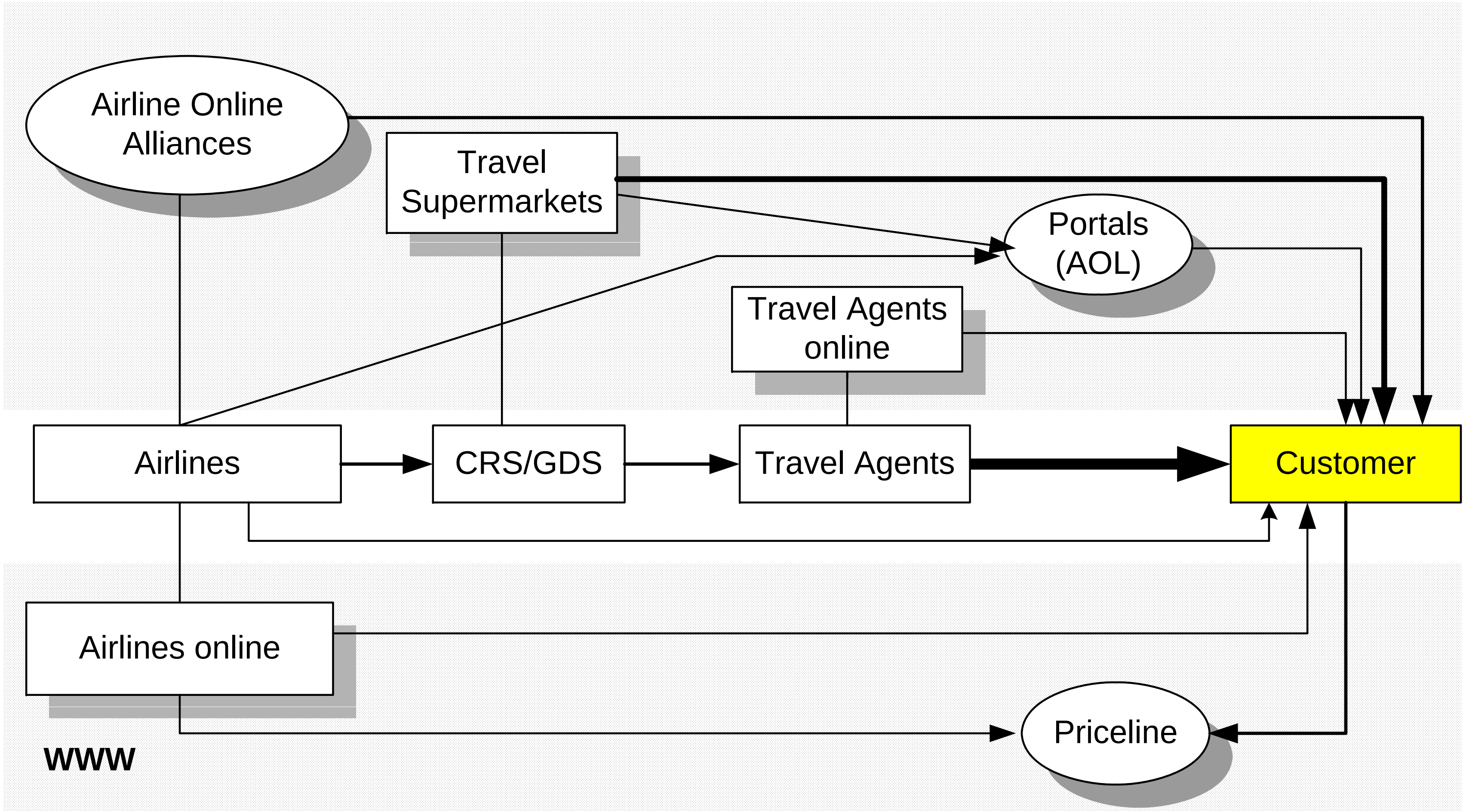
"AmEx announced on July 15 2003 it would buy the family-held Rosenbluth, which last year had more than $3 billion in revenue. American Express, which had $15.5 billion in travel-related revenue last year, said the deal would give it greater reach globally, upgraded technology and provide customers greater economy of scale."

http://www.bizjournals.com/philadelphia/stories/2003/08/18/newscolumn4.html

"Refunds for delayed flights"

Innovative compensation scheme for delayed flights on selected airlines. Hal Rosenbluth argues, he would rather invest in compensating travelers then in advertising.

A stylized description of the current situation



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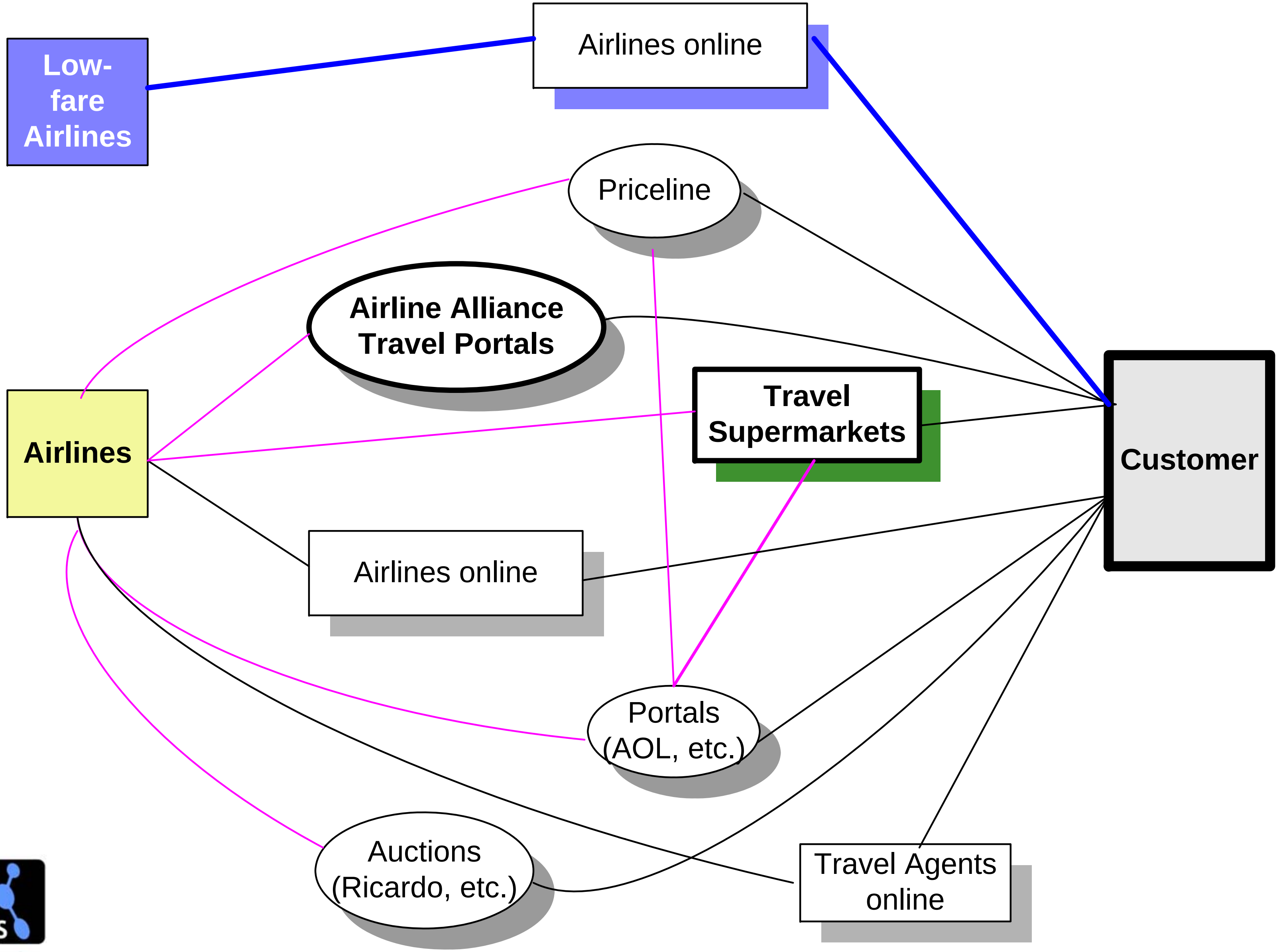
... another view



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Winners and losers

- As the Web provides efficiency and market access small market segments for **specialized product & price offerings** have successfully emerged but appear to be restricted to niches.
- **Smaller airlines** with fairly simple low-cost offerings and price incentives for their clients to use their Online offering have successfully used the Web to leverage their market position.
- The **online travel supermarkets** have captured the biggest market share: one-stop-shopping sites with a broad assortment and efficient and versatile transaction support, integrating different business models such as online catalogs, demand collection and auctions.
- Many **travel agencies** are in severe danger of losing a critical part of their revenues which might become threatening for their existence. Despite still strong ticket sales, travel agents are striving to improve their efficiency and hence further consolidation in search of scale economies is likely.

Theory1 Move-to-the-market debate

- **The proposition**: From electronic hierarchies to electronic markets!
  ... the result of reducing coordination costs without changing anything else should be an increase in the proportion of economic activity coordinated by markets." (Malone et al. 1988, 591)
- **The rebuttal**: Move to the middle!
  "This hypothesis states that the lower cost and better monitoring capability of IT and the lower relationship specificity of IT investments will cause firms to engage in a greater degree of outsourcing; moreover, this increased outsourcing will be from a reduced set of suppliers with whom the firm has long-term cooperative relationships." (Clemons; Reddi 1993, 809)
- **The synthesis**: Mixed-mode hypothesis
  "In essence, Information Systems enable organizations to do what they want much more efficiently and flexibly." (Holland; Lockett 1994, 409)

Theory2 Disintermediation/ cybermediation debate

- **The proposition**: Disintermediation
  Benjamin and Wigand (1995) have hypothesized effects of the proliferation of the Web on the restructuring and redistribution of profits among the stakeholders along value chains. Disintermediation is one of the main effects.
- **The rebuttal**: Cybermediation
  Sarkar et al. (1995) argue that a number of factors in the emerging electronic marketplace have contributed to making intermediated transactions an attractive option. Cybermediaries can achieve cost advantages for intermediated transactions by negotiating favorable deals, bundling and pooling services on the supply side and demand on the other side.

Causes why suppliers reintegrate retail functions

- They can do it cheaper.
- They can do it better.
- They want more control.
- They have want it all along but what used to be too costly can now be achieved because of the Web.

CyberMediaries: Intermediaries in Cyberspace

Examples:

- the information filtering agents (who cater to specific info-needs),
- exchange brokers (who mediate transactions),
- transaction-risk reducers (credit rating services of commercial sites on the net akin to Better Business Bureaus),
- bias-reducers (evaluative services),
- traffic-directors (who influence the direction of net traffic),
- omni-media firms (that combine different media to enrich the buying process through the internet),
- fan club promoters (devoted to developing consumer loyalties and communities of users on the net), and
- market research agencies (who report on site visits, proportion of conversions, competitive activities, and developments).

(Source: Sarkar 1995)

Intermediaries' functions

- Information services,
- efficient coordination of exchange relations,
- balancing suppliers' interest and customer needs,
- adding distinctive value, typically based on the potential of the Web,
- specific exchange institutions such as trust and credibility mechanisms.

Background: traditional retailers' functions

- Customer contact/ access
- Product information
- Advise, recommendations
- Selecting and evaluating suppliers and products
- Product configuration
- Repackaging (lot size)
- Covering space, i.e. logistics and distribution
- Covering time, i.e. warehousing
- Improving products
- Bridge financing

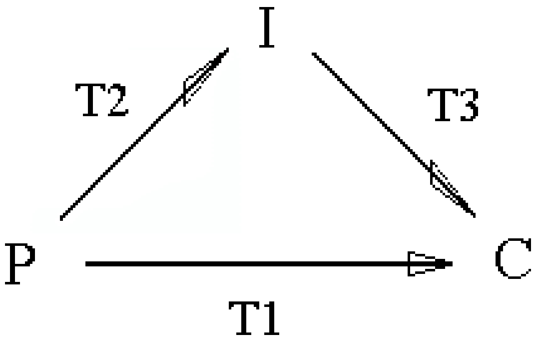
Source: Falk; Wolf 1992

Value adding functions of intermediaries

- **Search or information economies**
  ... facilitation of knowledge and information, supplier and customer matching, trust, and marketing information.

- **Exchange or allocation economies**
  As the efficiency of transactions depends largely on their volume and predictability, intermediaries are pooling and buffering (supply and) demand.

Possible effects of the Internet on intermediaries



Transaction cost comparison

Direct sales (**P**roducer to **C**onsumer) vs.

Intermediated sales (**P** to **I** to **C**)

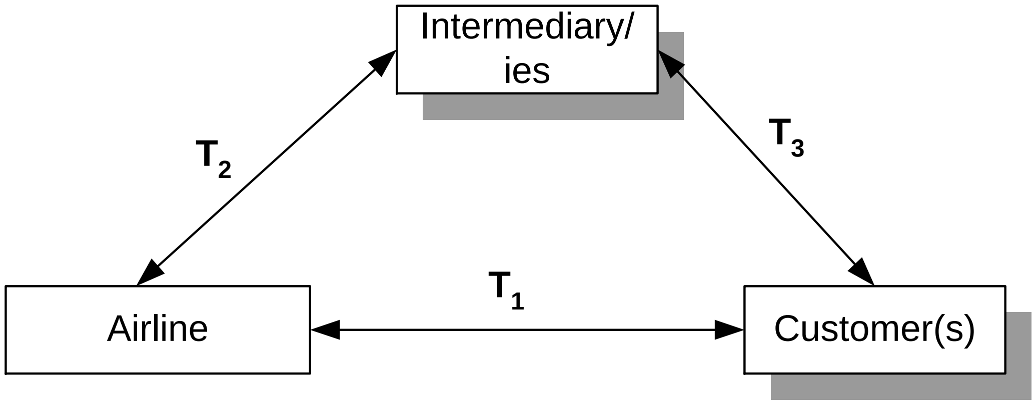
Pre-Internet

Post-Internet

	T1 < T2 + T3 cost advantage direct sales	T1 > **T2 + T3** advantage intermediated sale
T1' < T2' + T3'	**Re-inforced direct sales** Supplemented direct market and empowerment	**Dis-intermediation** Threatened Intermediaries
T1' > **T2' + T3'**	**Extra-intermediation** Cybermediaries	**Re-intermediation** Supplemented Intermediaries

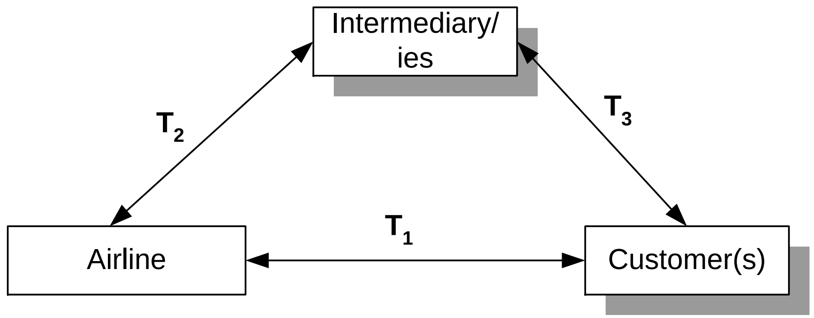
Adapted from: Sarkar, Butler and Steinfield (1995)

Cost drivers



T2	Coordination among supplier(s) and intermediary Cost drivers: division of labor, number of players
T1 / T3	Comparison of product price and value proposition, transaction cost (information asymmetries, uncertainty, frequency, asset specificity, risk of opportunism, execution cost) cost drivers: number of players, switching cost

Cost impact of ICT



- ICT is reducing information and coordination costs.
- (Ex ante and ex post) contracting costs and related risks may be higher.
- There is a plethora of intermediaries with varying roles and functions, leading in some cases to a comparison between apples and pears.
- The comparison is not sufficient on a one-by-one basis, but costs to be considered include economies of scale and scope.

Opportunities and risks

Customer	T1: value proposition, information cost of comparing different suppliers' offers, risk of lock-in effects T3: value proposition, e.g. unbiased comparison, choice …
Inter-mediary	T2: number of suppliers, level of integration, volume discounts T3: number of customers, service level
Airline	T2: number of intermediaries T1: set-up and operational cost for direct sales, potential adverse reactions from distribution partners

Underlying trends in markets

The two debates highlight different aspects of a larger trend of market structure changes:

- the first is focusing on the **coordination mechanisms**,
- the second on the structure of the **supply chain** and interdependencies between the traditional and the electronic market space. Both use a transaction cost rationale.

Open issues

A number of open issues remain:

- Explaining the (ongoing) change dynamics.
- Understanding the (industry) contingencies affecting the changes.
- Grasping emerging models of interorganizational division of labor and (marketing, distribution and service) cooperation.

Theory3 Making sense (interpretative approaches)

- **Beyond e-tailing – roles and linkages**: New models of division of labor and cooperation, changing structures of value systems/ business networks (e.g. value webs).
- **Contingencies:** Industry, product and transaction characteristics
- **Mixed-modes - best of several worlds**: Strategically designed combinations of traditional and online word, global and regional scope, market and hierarchy.
- **Theoretical challenges**: Concept of market.

Market functions and effects of EM on Intermediation

Market Function	Electronic Market Influence	Likely Effects on Intermediation
Determination of Product Offerings	Personalisation of Products Aggregation Disaggregation	Disintermediation (esp. digital products) Cybermediation (aggregators) Disintermediation (pay-per-use)
Searching	Lower Search Costs More Complex Search Requirements Lower Barriers to Entry	Disintermediation Cybermediation Cybermediation/Re-intermediation
Price Discovery	Redistribution of Mechanisms New Markets	Cybermediation/ Re-intermediation Cybermediation
Logistics	Lower Logistical Costs Economies of Scale	Disintermediation Re-intermediation
Settlement	New Cost Structures New Payment Mechanisms	Re-intermediation Cybermediation/ Re-intermediation
Trust	Increased Protection Requirements	Cybermediation/ Re-intermediation
Regulatory	Institutional Support for EM	Re-intermediation

Contingencies (1): channel characteristics

- supply-demand-ratio, fragmentation of supply, latent or fragmented demand,
- degree of market transparency,
- allocation inefficiencies
- degree of regulation and regulation issues,
- degree of concentration,
- intensity of competition,
- value chain structure (established roles of intermediaries, role of suppliers)
- degree of price volatility and price discrimination.

Contingencies (2): product characteristics

- customer price sensitivity (price sensitivity vs. brand loyalty),
- product complexity and degree of standardization,
- peculiarity (unique service offerings vs. commodities),
- degree of standardization and exchangeability of products and services,
- possibilities and cost of bundling and configuration,
- (marginal) production cost, and
- perishability.

Contingencies (3): transaction characteristics

Transaction charac-teristics	Potential impact of intermediary
Information asym-metries	Reducing information asymmetries for customers and suppliers, facilitating supplier and customer matching
Uncertainty	Reducing uncertainty
Frequency	Increasing frequency of transactions for customers and suppliers
Asset specificity	Reducing asset specificity
Risk of opportunism	Reducing the risk of fraud as trustworthy third party
Confidence	Providing a secure platform guaranteeing privacy
Execution cost	Providing electronic payment, clearing and logistic ser-vices

Hypothesis

- H 1: When the *supplier market is monopolistic* or oligopolistic (i.e. a small number of suppliers dominate on product or price) and the *intermediaries are fragmented* and have limited control over consumer behaviour, direct sales win and disintermediation is the most likely outcome.
- H 2: When *market or product knowledge* or augmentation is vital, intermediaries can dominate, especially through differentiation and better positioning in the market.
- H 3: When traditional *intermediaries use value-based pricing* and position the electronic channel to augment their traditional service offerings, they have a good chance to defend their position.

Hypothesis cntd.

- H4: When intermediaries have been *protected against intense competition* from outside the industry and the supplier market is fragmented or consumers have a preference for unbiased choice, cybermediaries will seize the opportunities that the Web provides and offer innovative services.
- H 5: When *purchase decisions are complex* and varied, and the market is highly fragmented, cybermediaries can add value by simplifying information search.

Conclusions

- The Web facilitates a convergence of globally **dominant strategies** even across industries. A result of imitation?
- The Web can be used and is used to **reduce price transparency** as the potential search space is rising fast with the number of potential vendors and the increasing degree of a multitude of price differentiation mechanisms undermines (automatic) price comparison mechanisms.
- The Web **drives concentration** despite the sketched emergence of a multitude of cybermediaries:
  - Small, innovative players can shake up established market structures and position themselves successfully in specialized market segments.
  - However, overall the Web has become a-few-winners-take-all game, favoring those players which can successfully draw the attention of the masses and leverage economies of scale and positive network externalities.

Finally ...

- the Web has contributed to a **profound market transformation**, lowering the entry barriers of new players who often followed different rules than the incumbents.
- Early victories of new entrants have changed the playing field, but the **incumbents tend to fight back** and leverage their (financial) power, their brands, established relationships, and click and mortar strategies.