

Ticketing System of 21st Men's World Handball Championship

Darko Homar

Head of development & consulting

DEKOD telekom

HrOUG presenter: Goran Matiša

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OPEN
WORLD

MOSCONE CENTER, SAN FRANCISCO
OCTOBER 11 - 15, 2009

HANDBALL



13.-17. LISTOPAD 2009, ROVINJ

DEKOR
t e l e k o m

HANDBALL

- Handball is played around the world

Europe

Asia

Africa

South America

- Megapopular in Europe

Germany, France, Spain, Denmark, Sweden...
of course, Croatia

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HANDBALL IN CROATIA



13.-17. LISTOPAD 2009, ROVINJ

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HANDBALL IN CROATIA

- World's top in last 15 years
- Gold and silver Olympic medals
- World Championship 1st and 2nd places
- World Cup

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OCTOBER 11 - 15, 2009

WORLD HANDBALL CHAMPIONSHIP 2009



13.-17. LISTOPAD 2009, ROVINJ

DEKOL
t e l e k o m

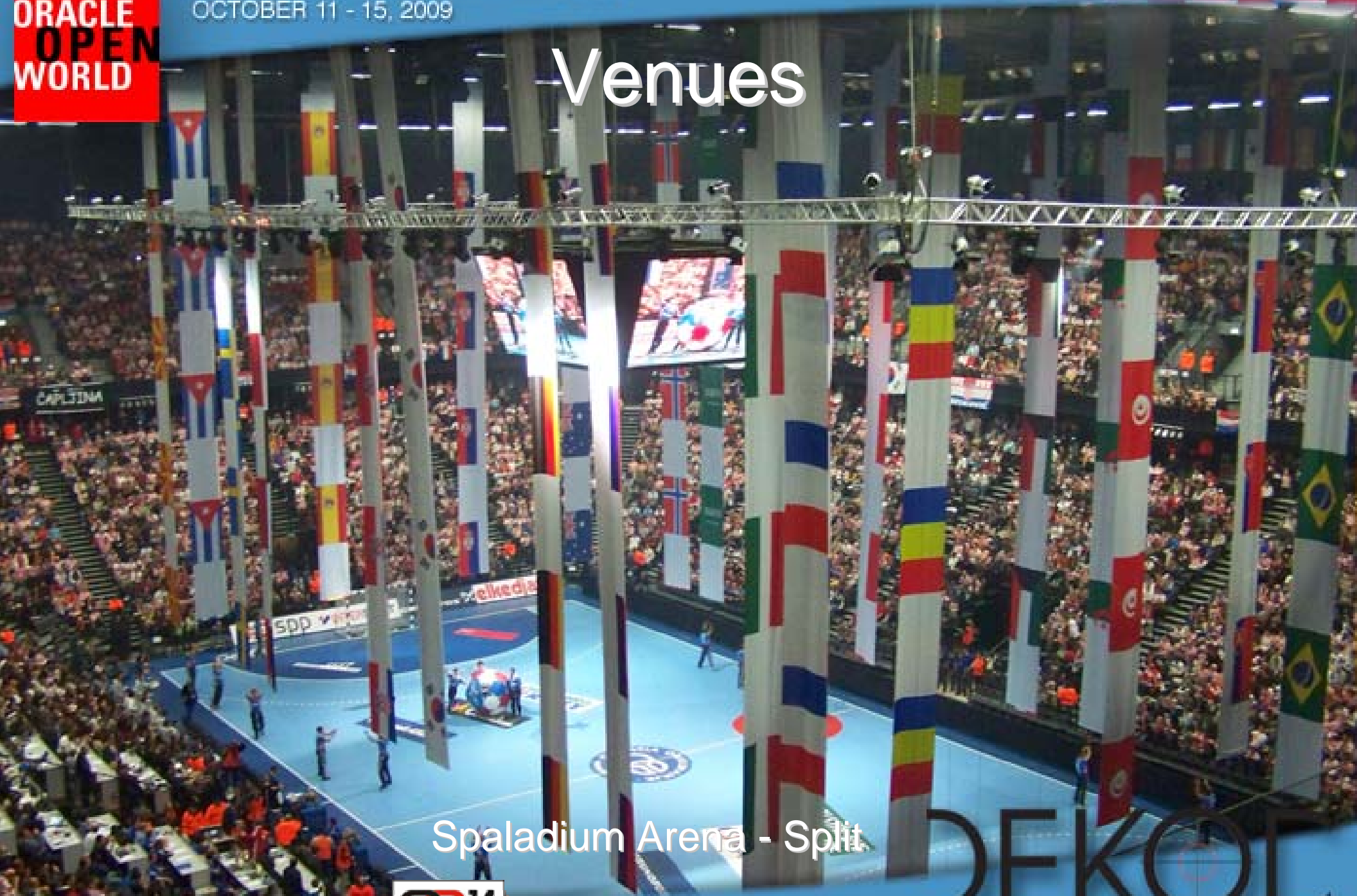
WORLD HANDBALL CHAMPIONSHIP 2009

- broadcasted on 90 different TV channels
- 130 mil TV viewers of finals France vs. Croatia
- 102 matches
- 42 match days
- 7 venues
- 5 sales channels
- 4 access control solutions
- 300.000 tickets issued





Venues



Spaladium Arena - Split

Venues



Arena Poreč

Venues



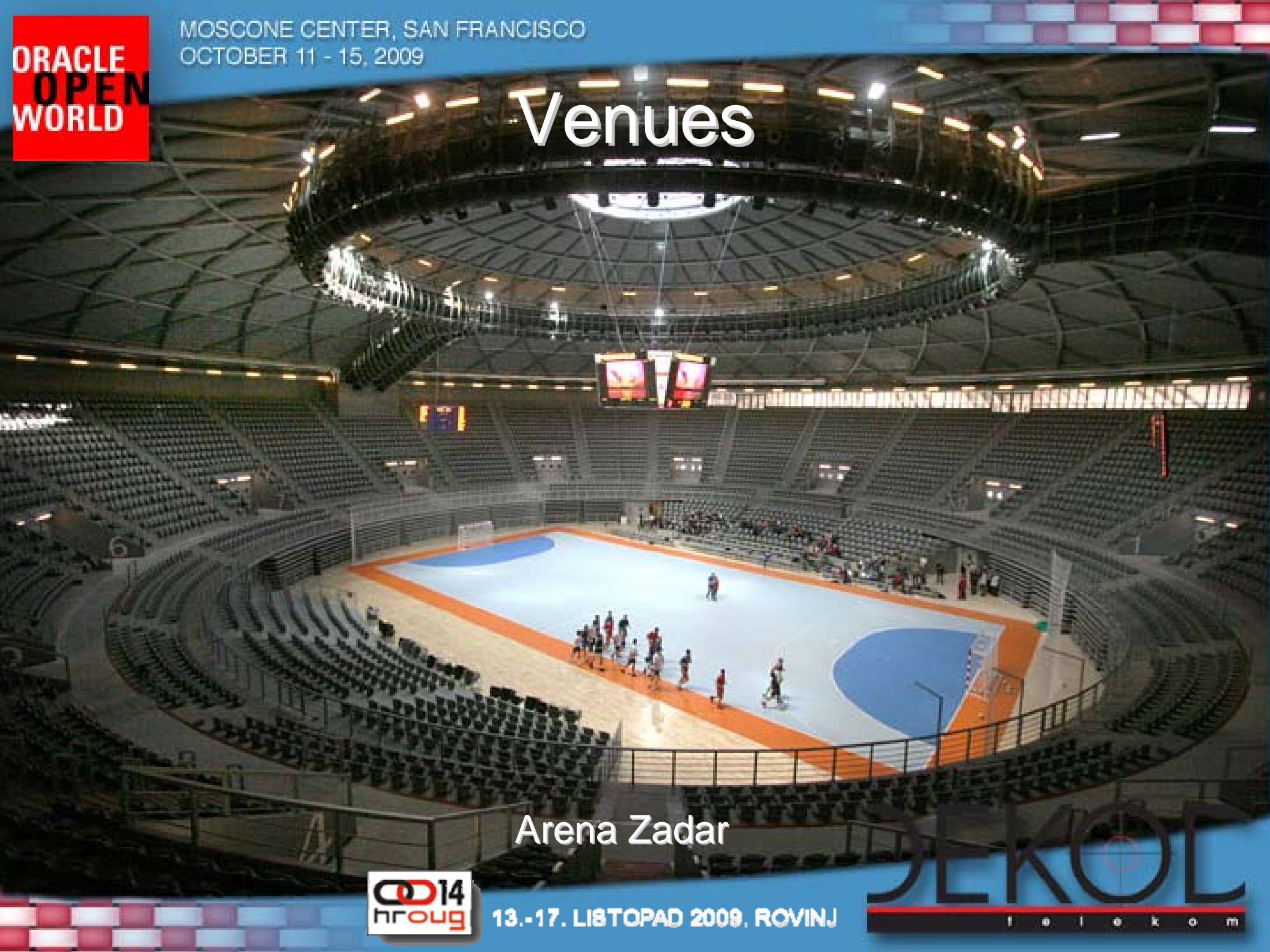
Arena Varaždin

Venues



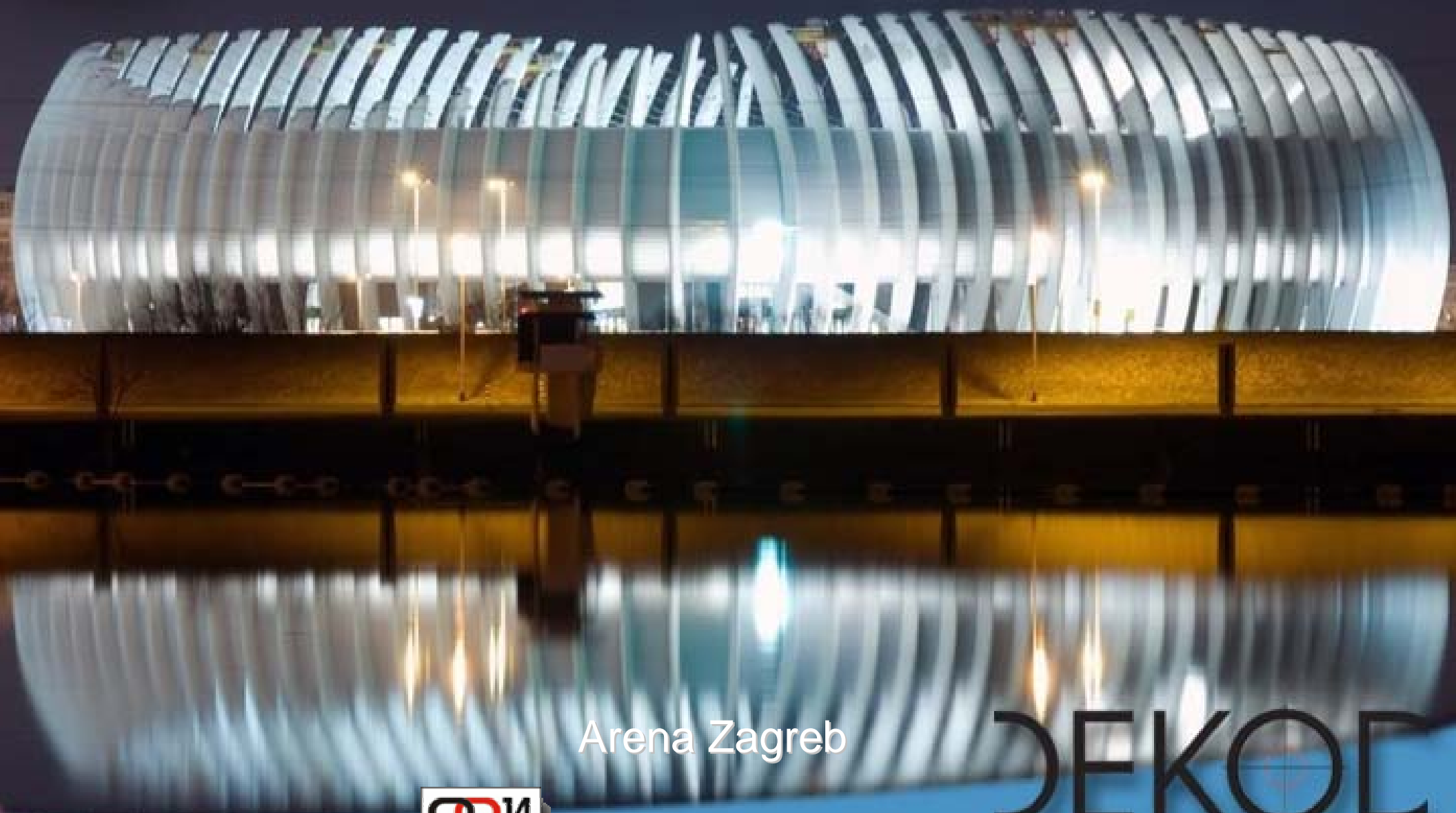
Arena Osijek

Venues



Arena Zadar

Venues



Arena Zagreb

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OCTOBER 11 - 15, 2009

DEKOD

t e l e k o m



13.-17. LISTOPAD 2009, ROVINJ

Why DEKOD telekom?

- ticketing software > 10 years experience
- ticketing service > 5 years
- Paganini project (ticketing) won Oracle Apps World Elevator Pitch contest in 2001 (Paris)
- Oracle
 - 24 years of experience!
 - Oracle Certified Partner
- has its own Internet (data) center

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OCTOBER 11 - 15, 2009

CO14
HROUG

13.-17. LISTOPAD 2009, ROVINJ

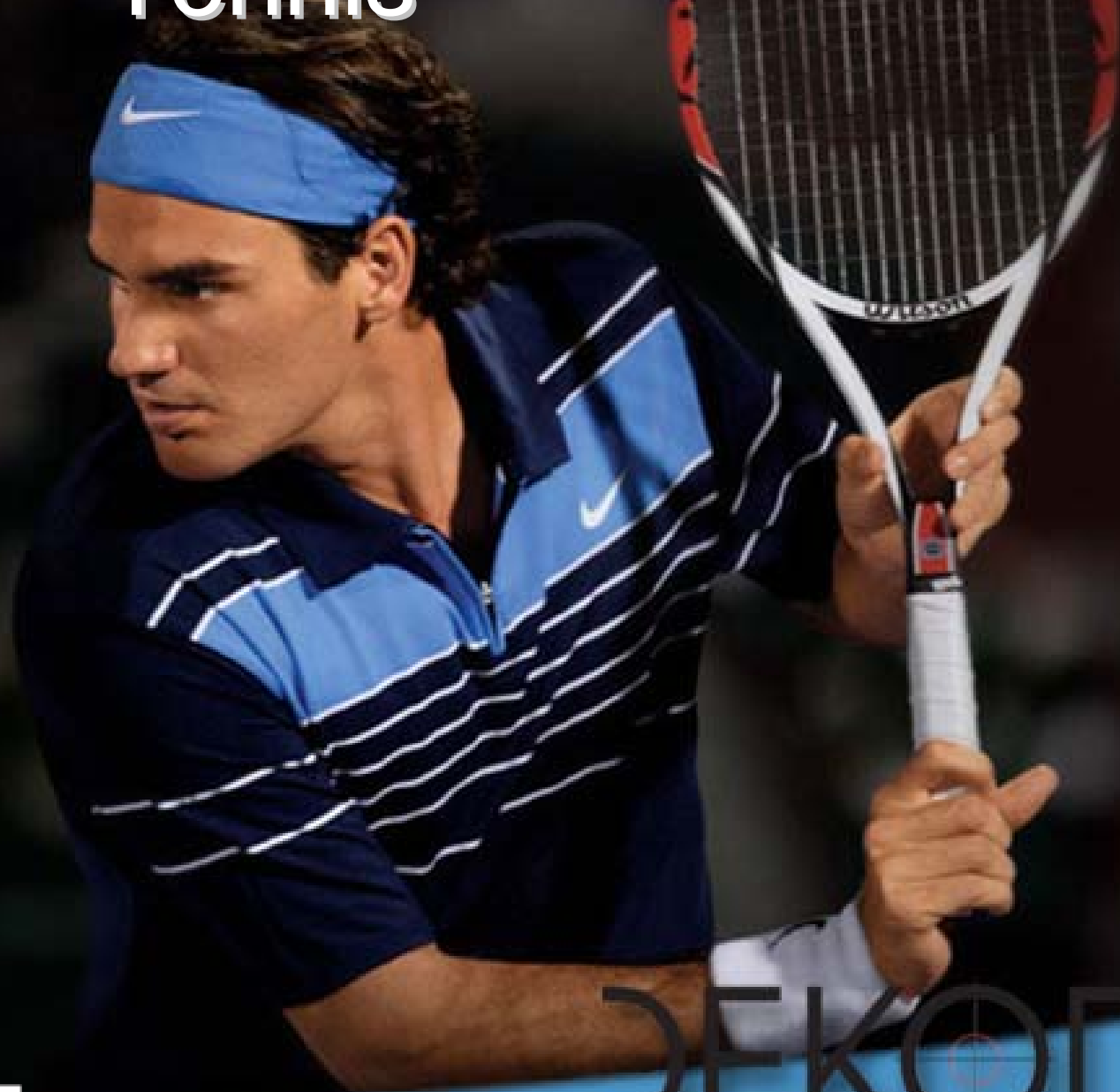
DEKOL

l e l e k o m

ORACLE
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WORLD

MOSCONE CENTER, SAN FRANCISCO
OCTOBER 11 - 15, 2009

Tennis



13.-17. LISTOPAD 2009, ROVINJ

DEKOL
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Soccer



13.-17. LISTOPAD 2009, ROVINJ

DEKOL
t e l e k o m

About DEKOD telekom

- privately owned company since 1992
- Telecom division:
 - JDSU partner, test and measurement solutions
- Software division:
 - BI, ticketing, SW projects
 - ticketing service
- ISO 9001:2008 certified
- Oracle Certified Partner

Project scope

- to provide ticketing service
- to interface with access control systems
 - every venue has different AC system, or none
- to provide access control where AC system not available

t e l e k o m

Ticketing service

- Sales channels:

internet

outlets (agencies)

box offices

ticketing center

- Distribution of tickets: delivery service
- Hardware & software: servers, workstations, printers...
- staff, call center, printing paper...

Timeline



2008/11/1
Project start

2008/11/24
Sales start

2009/01/15
Championship
start

2009/02/01
Finals

Project
closure

Challenges

- Short preparation time
- Building organization - outsourcing and contract employees
- Adjustments to specific rules regarding seating plans, pricing, sales process
- Arenas were not quite ready yet ;)

Project team

- 15 people from DEKOD telekom
- 15 hired
- 50 in the outlet organization (Tisak)

Simple ticketing process

- example: rock concert
- define price categories
- include VIP box definitions
- take care of sponsor tickets
- sell - internet, outlets, box offices...
- access control

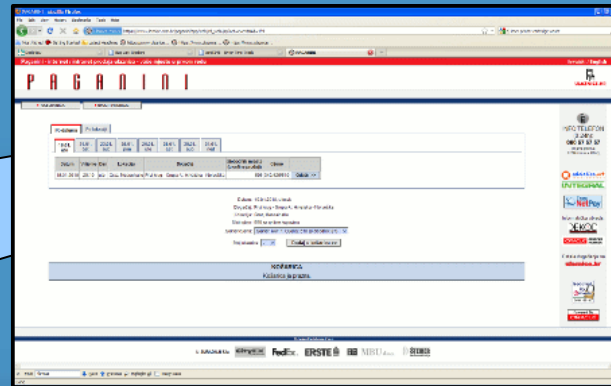
Handball World Championship Ticketing Process



Handball World Championship Ticketing Process

- one ticket for the 3 matches on a "match day"
- seating plan definition
 - not recommended to mix supporters from different countries
 - press areas
 - IHF (International Handball Federation) area
 - seats for national teams not playing at the time
 - two VIP areas
 - sponsors
 - seats lost for technical purposes (TV)

Internet



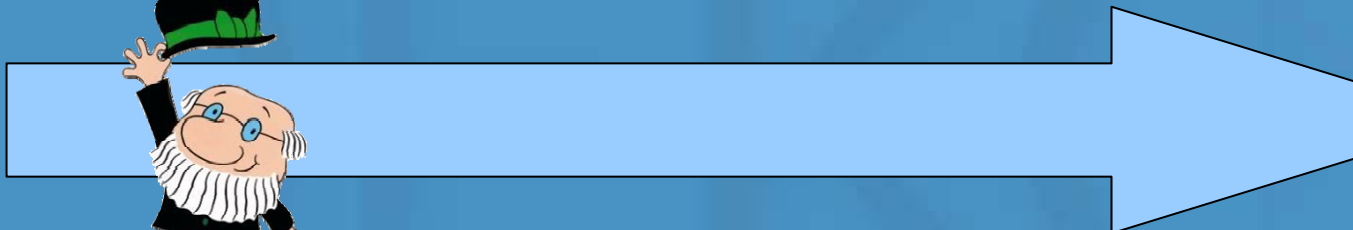
Ticketing center



Outlets

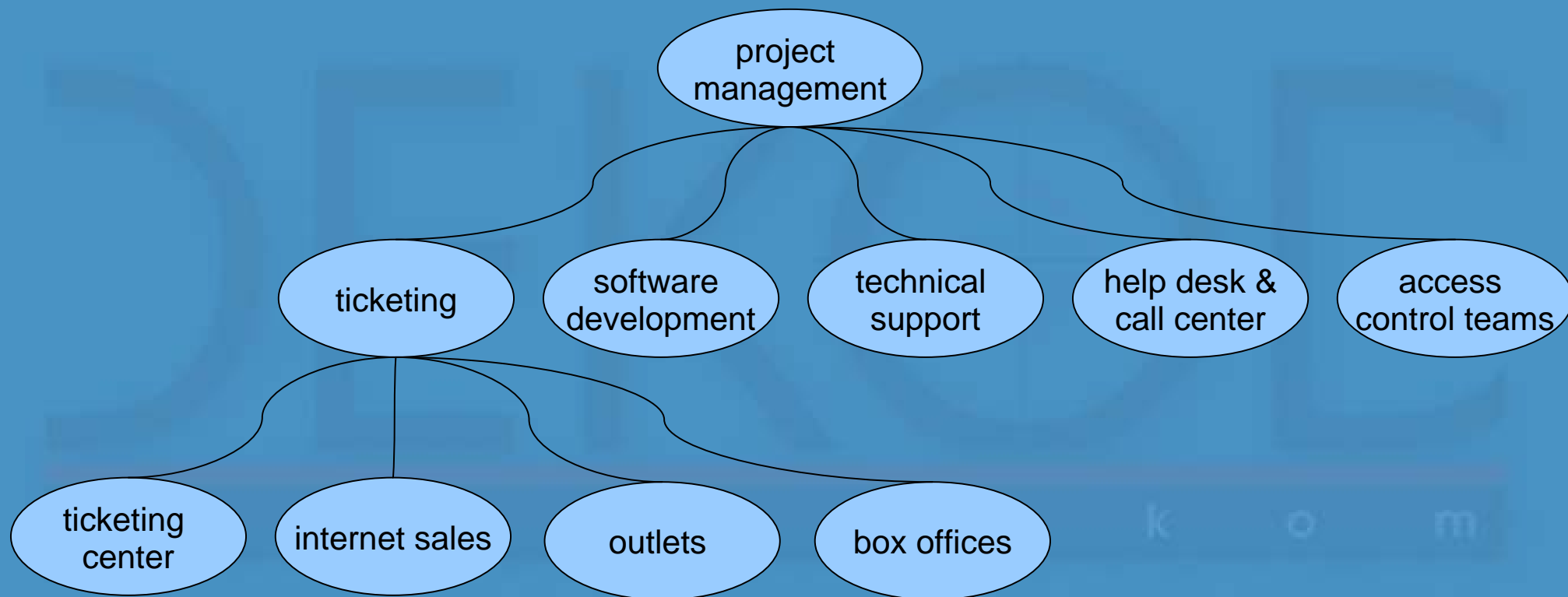


Local box offices

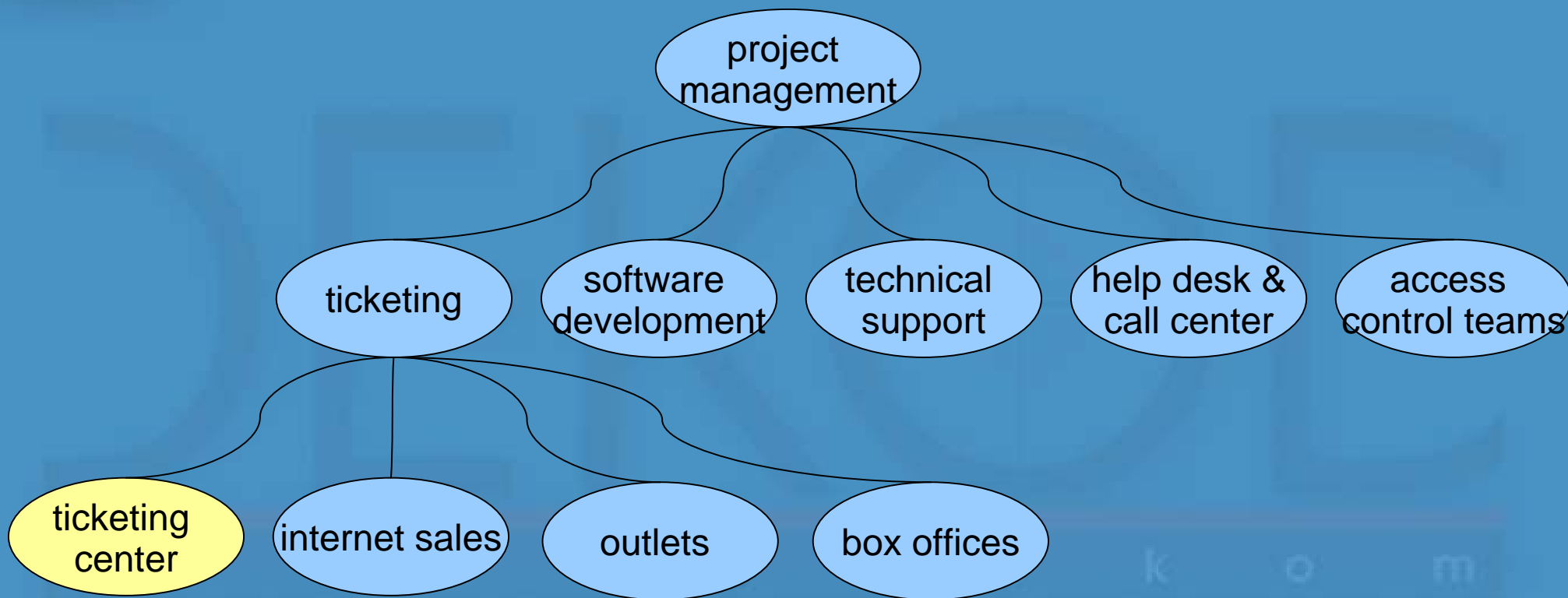


t e l e k o m

Project Organization



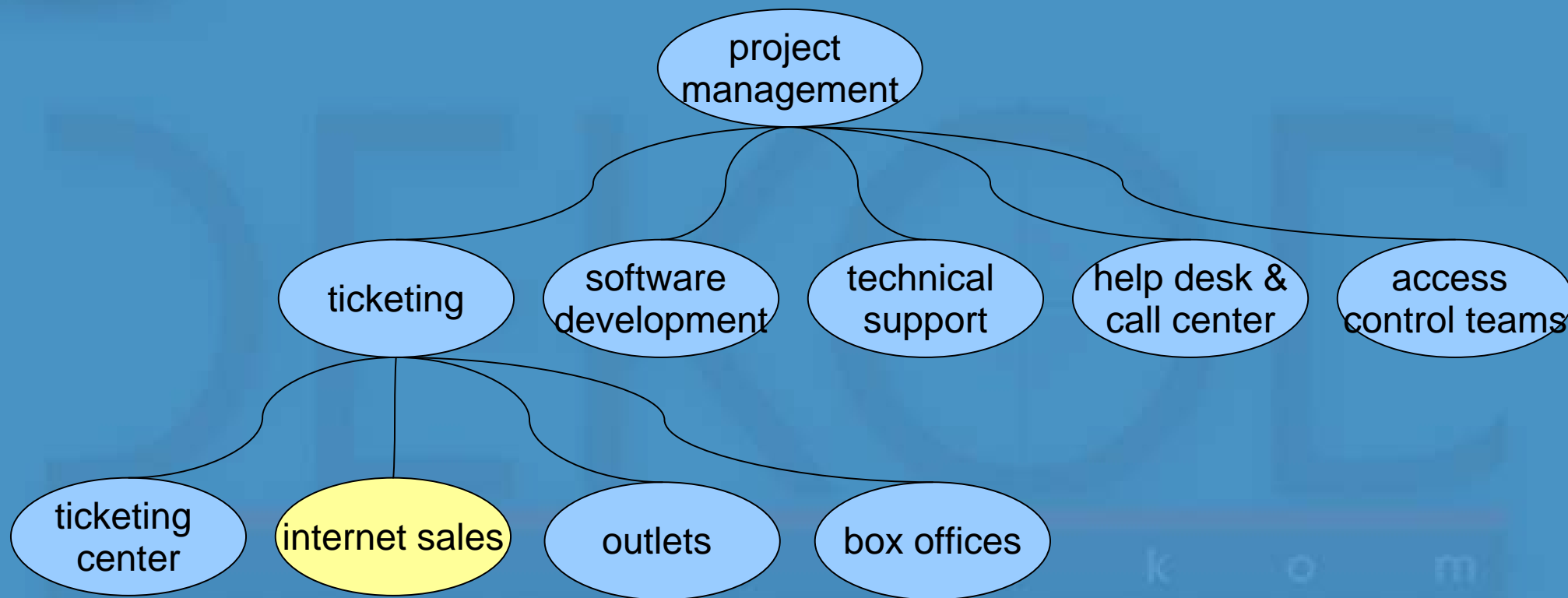
Project Organization



order processing
payment processing

seating plan administration
ticket issuing

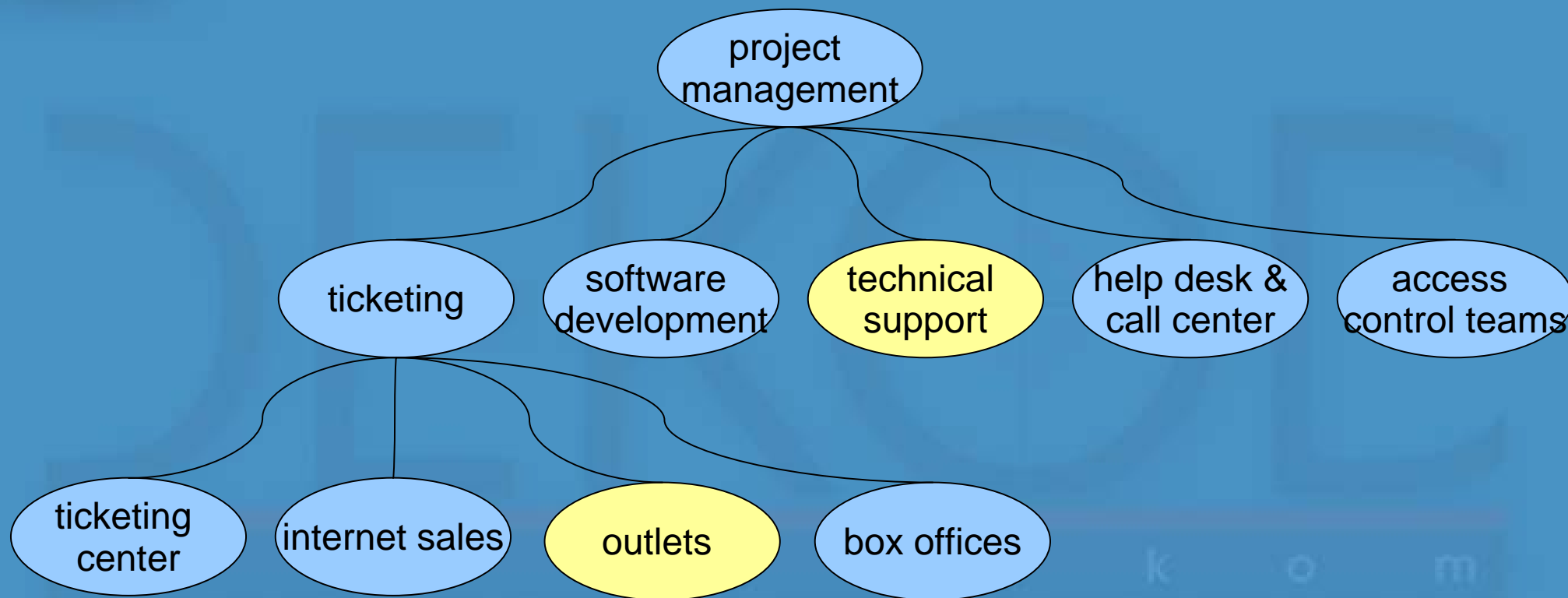
Project Organization



sales channel control
packaging and delivery

payment processing

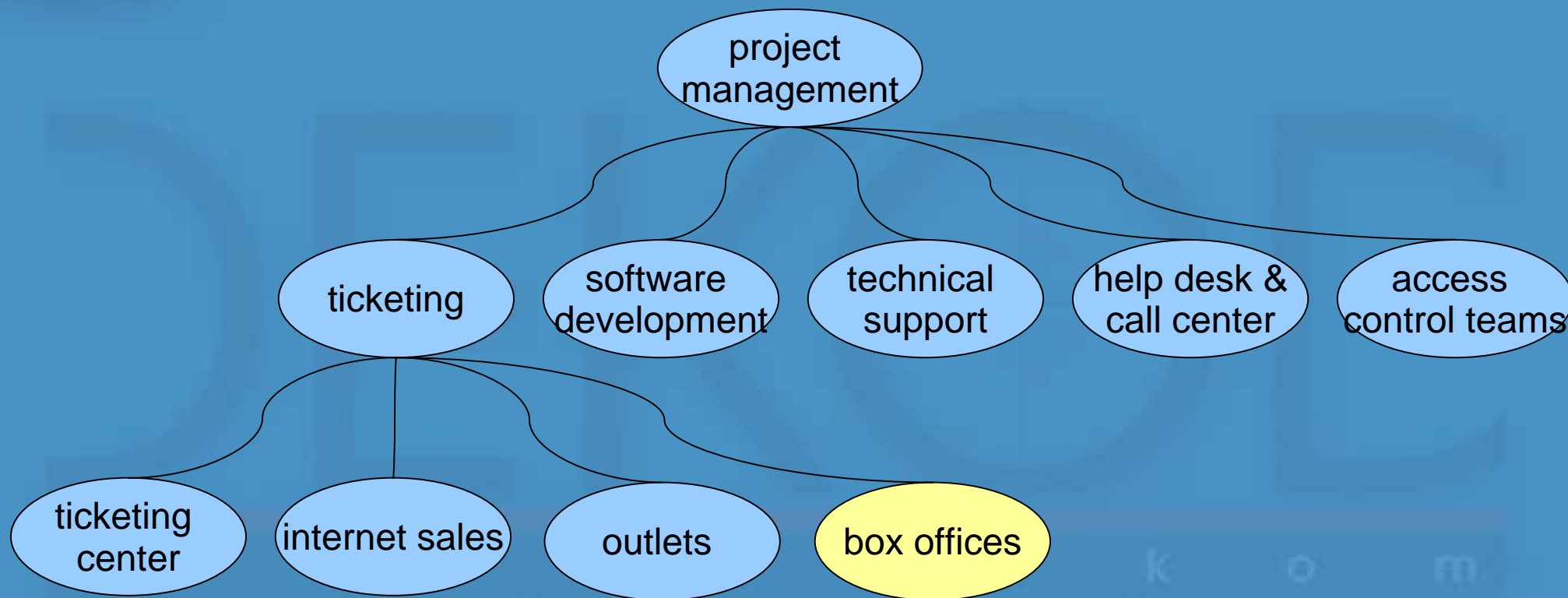
Project Organization



hardware & software installation
ticket paper supply

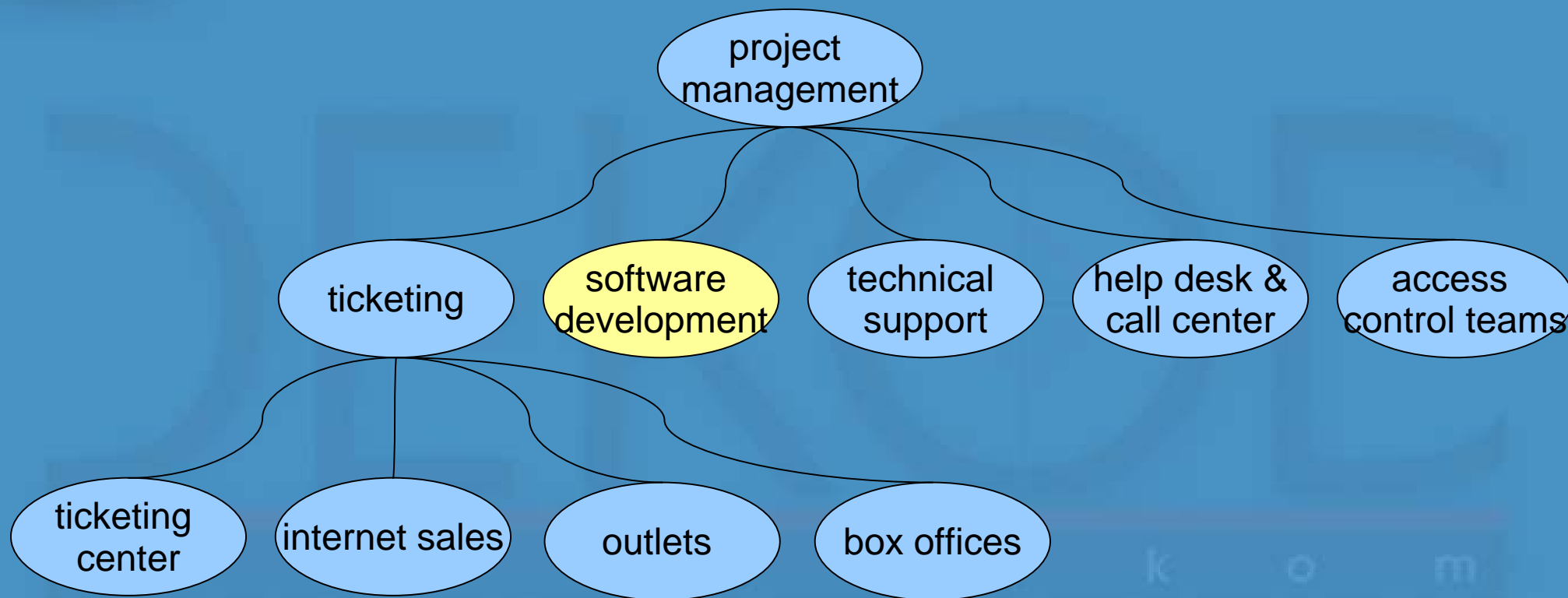
education
ticket paper control

Project Organization



ticket sales
ticket collection (tickets bought through other sales channels)

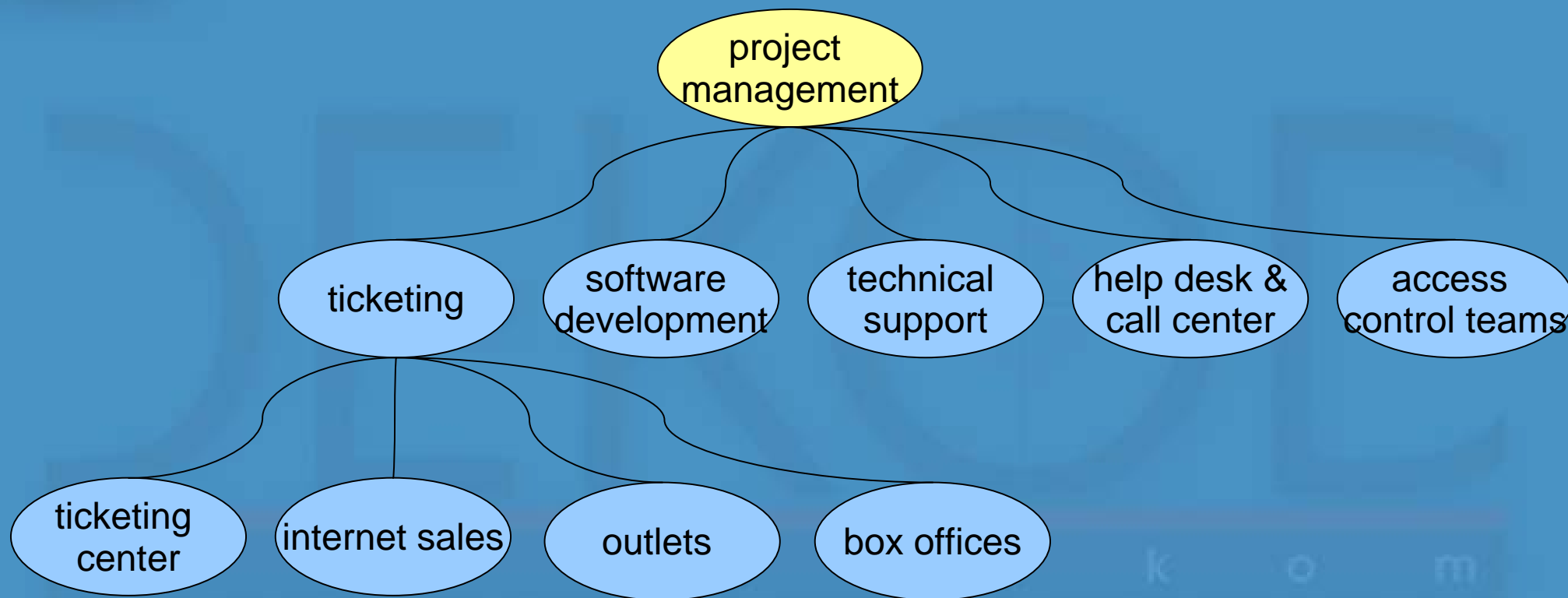
Project Organization



new reports
access control interfaces

continuous improvement (outlet app - new partner!)
bug tracking and resolving

Project Organization



sales control
communication - CHF, partners, accounting...

cash flow control

HR management

Issue detection

Pre-sales definitions

- Seating plans

sectors, rows, seats

Arenas not finished yet!

technical seats - TV cameras etc

- Price categories definition

- Access control: zones, AC devices definition

- Event definition

- Sales channel control

Seating plan definition

PAGANINI definicije - Mozilla Firefox

ulaznice.com.hr https://www.ulaznice.com.hr/paganini/app/sp2009_demo/defn/rep.jsp?xf=sektori&xs=sektori&js=script&js=script2&cs=a&cs=b&sif_dvorane=APO01

DeskNow | Bug List: Riješeni | acbTIME - Enter Time-Track | PAGANINI | 1253707453baltazar.jpg (JPE... | ibxp4.jpg (JPEG Image, 900x... | tisakmedia slike - Google Slike | PAGANINI definicije

Venue: APO01 / Capacity: 4146

< Back to venues | Unlock | Add sector | Delete sector

Venue: APO01 / Capacity: 4146

Sektor	Šifra	Kapacitet
A	A	68
B	B	126
C	C	126

Seating plan definition

PAGANINI definicije - Mozilla Firefox

ulaznice.com.hr https://www.ulaznice.com.hr/paganini/app/sp2009_demo/defin/rep.jsp?xf=ulaz_u_redak&xs=ulaz_u_redak&js=script2&cs=b&cs=a&seif_dvorane=AZG01&seif_sektora=113

DeskNow Bug List: Riješeni actiTIME - Enter Time-Track PAGANINI 1253707453baltazar.jpg (JPE... ibxp4.jpg (JPEG Image, 900x... tsakmedia slike - Google Slke PAGANINI definicije

Venue: AZG01 / Sector: 113

<< Back to venues < Back to sectors Invert seat numbers Change first number of row

Row spacing

Row:0 Row shift 87 88 89 90 91 92 3-- 93 94 95 96 97 98 99

Row spacing

Row:1 Row shift 136 137 138 139 140 141 3-- 142 143 144 145 146 147 148

Row spacing

Row:2 Row shift 143 144 145 146 147 148 3-- 149 150 151 152 153 154 155

Row spacing

Row:3 Row shift 145 146 147 148 149 150 3-- 151 152 153 154 155 156 157

Row spacing

Row:4 Row shift 154 155 156 157 158 159 3-- 160 161 162 163 164 165 166

Row spacing

Row:5 Row shift 157 158 159 160 161 162 3-- 163 164 165 166 167 168 169

Row spacing

Row:6 Row shift 158 160 161 162 163 164 3-- 165 166 167 168 169 170 171

Row spacing

Row:7 Row shift 160 161 162 163 164 165 3-- 166 167 168 169 170 171 172

Row spacing

Row:8 Row shift 160 161 162 163 164 165 3-- 166 167 168 169 170 171 172

Row spacing

Row:9 Row shift 167 168 169 170 171 172 3-- 173 174 175 176 177 178 179

Row spacing

Row:10 Row shift 160 161 162 163 164 165 3-- 166 167 168 169 190 191 192 2-- 193 194 195 196 197

Row spacing

Row:11 Row shift 168 167 168 169 190 191 3-- 192 193 194 195 196 197 198 2-- 199 200 201 202 203

Row spacing

Row:12 Row shift 191 192 193 194 195 196 3-- 197 198 199 200 201 202 203 2-- 204 205 206 207 208

Row spacing

Row:13 Row shift 198 199 200 201 202 203 3-- 204 205 206 207 208 209 210 2-- 211 212 213 214 215

Row spacing

Row:14 Row shift 202 203 204 205 206 207 3-- 208 209 210 211 212 213 214 2-- 215 216 217 218 219

Row spacing

Row:15 Row shift 202 203 204 205 206 207 3-- 208 209 210 211 212 213 214 2-- 215 216 217

Row spacing

Row:16 Row shift 228 229 230 231 232 233 3-- 234 235 236 237 238 239 240 2-- 241 242 243

Row spacing

Row:17 Row shift -1

Row spacing (2)

Row:18 Row shift 15-> 168 169 170 171 172

Row spacing

Row:19 Row shift 12-> 213 214 215 216 217 218 219 220

Row spacing

Find: format Next Previous Highlight all Match



Seating plan definition

SP2009 DEMO - ADMIN - Mozilla Firefox

Vrijeme: 18.09.2009, petak
Naziv: Davis Cup; Hrvatska - Češka, 1. dan
Prostor: Poreč 3

Kapacitet	4578
Slobodno	230
Prodano	3774
Ponude	0
Rezervirano	504
Nije u prodaji	0
Tehnička	70
Službena rezervacija	0
Službeno	0
Ostalo	450
Ukupno bez teh. mj.	4508
Popunjenost	83.62%
Prodanost	82.44%

[Rekapitulacija sektora >>>](#)

Kapacitet	400
Slobodno	42
Prodano	307
Ponude	0
Rezervirano	51
Nije u prodaji	0
Tehnička	0
Službena rezervacija	0
Službeno	0
Ostalo	0
Ukupno bez teh. mj.	400
Popunjenost	89.50%
Prodanost	76.75%
Kanali prodaje	AGE/LOK/WEB

Odabrani sektor: SH

Slobodno mjesto
 Tehničko mjesto
 Službena rezervacija
 Rezervirano mjesto
 Gratis
 (abonman)
 (transakcija u toku)

Prodano mjesto
 Nije pušteno u prodaju
 Izdano službeno mjesto
 Ponuda
 Pouzeće
 Abonman ponuda

	09	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
1. 150 kn	09	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
2. 150 kn	09	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
3. 150 kn	09	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
4. 150 kn	09	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
5. 150 kn	09	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
6. 150 kn	09	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
7. 150 kn	09	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
8. 150 kn	09	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
9. 150 kn	09	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
10. 150 kn	09	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
11. 150 kn	09	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
12. 150 kn	09	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
13. 150 kn	09	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
14. 150 kn	09	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
15. 150 kn	09	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
16. 150 kn	09	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
17. 150 kn	09	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
18. 150 kn	09	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
19. 150 kn	09	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
20. 150 kn	09	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88

Find: format Next Previous Highlight all Match



Outlet/box office application

AGENCIJSKA PRODAJA @ ulaznice.com.hr - Mozilla Firefox

File Edit View History Bookmarks Tools Help

actTIME - Enter Time-Tr... PAGANINI 1253707453baltazar.jpg... bxp4i.jpg (JPEG Image, ... tsakmedia slike - Google ... AGENCIJSKA PRODAJ... MBU Internet Payment G...

DEKOD AGENCIJSKA PRODAJA @ ulaznice.com.hr - SP2009 DEMO Operator: Dekod agencija (AGEDEK/AGE) logged on since 04.10.2009 19:13

POČETNA BRZA PRODAJA POČETAK PRODAJE IZVJEŠĆA POMOĆ I PODRŠKA STORNO ODJAVA

16.01.5	CRO-KOR / ESP-KUW, SWE-CUB	Raspoloživo: 54	Cijene: 150/300/1500/2500	---	-	SLIKA
17.01.6	SVK-ARG, HUN-AUS, FRA-ROU	Raspoloživo: 120	Cijene: 150/300	---	-	SLIKA
17.01.6	EGY-SRB, NOR-KSA, DEN-BRA	Raspoloživo: 824	Cijene: 300	---	-	SLIKA
17.01.6	MKD			Tr. E Tribina Desno; Cijena: 150 (raspoloživo)	2	SLIKA
18.01.7	AUS					SLIKA
18.01.7	ALG					SLIKA
18.01.7	KSA					SLIKA
18.01.7	CUB					SLIKA
19.01.1	FRA					SLIKA
19.01.1	GER			Sektor: C Tribina; Cijena: 300 (slobodno: 9)	2	SLIKA
19.01.1	DEN					SLIKA
19.01.1	CRO					SLIKA
21.01.3	SVK					SLIKA

Slika prostora

Vrijeme: 17.01.2009, subota
Naziv: MKD-TUN, POL-ALG, GER-RUS
Prostor: Arena Varaždin

Slobodno: 114

Sektor: C Tribina; Cijena: 300 (slobodno: 9) 2

Dodaj >>

Dodaj u košaricu >>

KOŠARICA
Košarica je prazna.

Session alive 19:17:04

Outlet/box office application

AGENCIJSKA PRODAJA @ ulaznice.com.hr - Mozilla Firefox

Operator: Dekod agencija (AGEDEK/AGE) logged on since 04.10.2009 19:13

POČETNA | BRZA PRODAJA | POČETAK PRODAJE | IZVJEŠĆA | POMOĆ I PODRŠKA | STORNO | ODJAVA

Broj narudžbe **62429**
Iznos za naplatu **600 Kn**

#	Datum	Lokacija	Događaj	Sektor	Red	Mjesto	Osn.cij.	Popust	Popust (%)	Popust iznos	Cijena
1.	17.01.2009 20:00, sub	Osijek	SVK-ARG, HUN-AUS, FRA-ROU	Istok A1 Teleskop	6	19	300	Bez popusta	0	0	300
2.	17.01.2009 20:00, sub	Osijek	SVK-ARG, HUN-AUS, FRA-ROU	Istok A1 Teleskop	6	20	300	Bez popusta	0	0	300
Ukupno:										600	

[Nova kupovina >>](#) [Ponovni ispis ulaznica](#)

0000274203

2213786

OSIJEK

Preliminary round / Prvi krug 17.01.2009.
Group A/Skupina A (SVK-ARG, HUN-AUS, FRA-ROU)

Entry/ulaz: Sjever Sector/sektor: Istok A1 Teleskop
Row/red: 6 Seat/sjedalo: 19 Price/cijena: 300 HRK

oper. agedek, Ticketing center, Dekod telekom d.o.o., 04.10.2009. 19:14

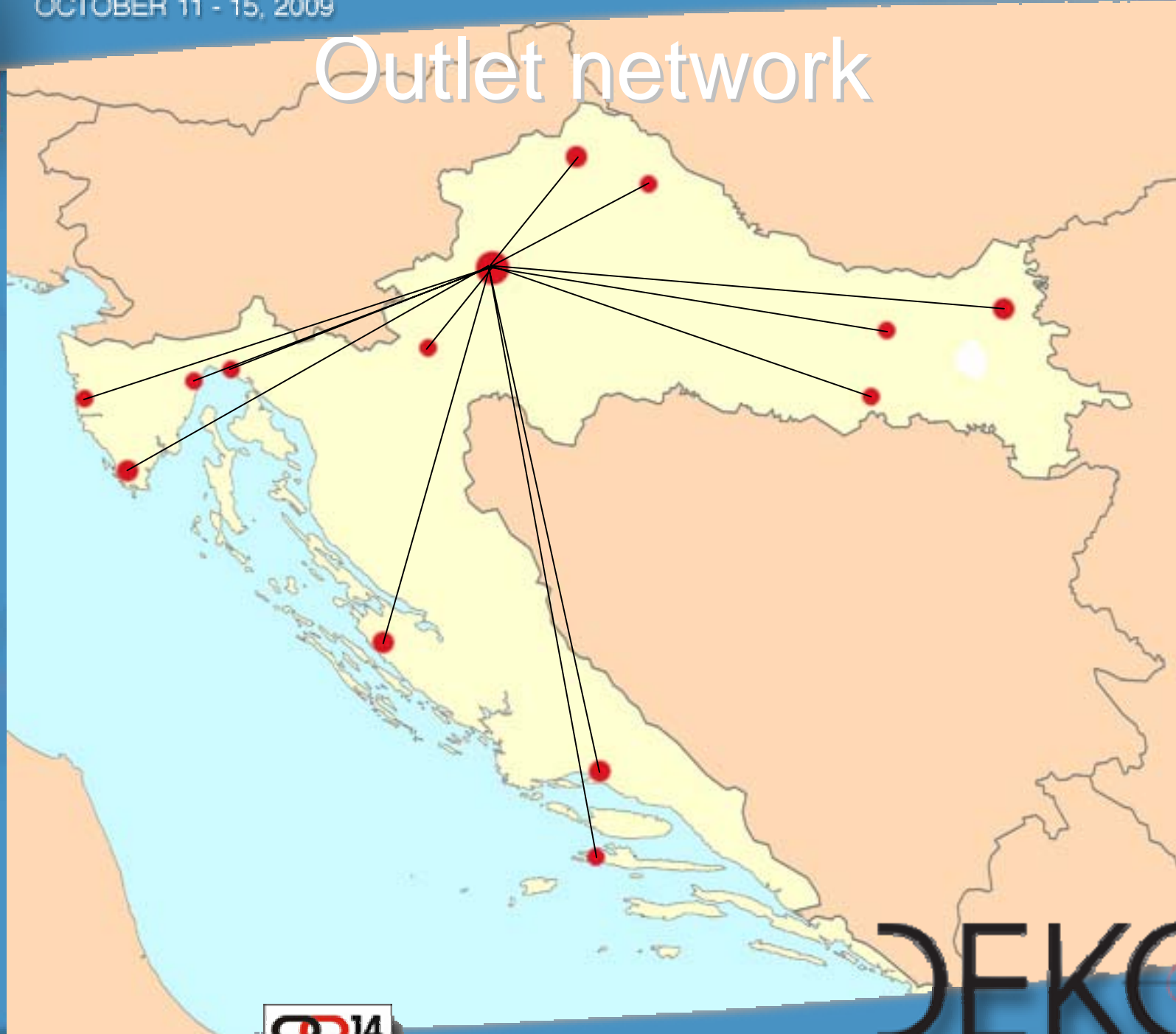
OSIJEK
17.01.2009.

0000274203

Session alive 19:14:11

Find: format | Next | Previous | Highlight all | Match case

Outlet network



Outlets

- network - ADSL lines
- provide equipment
- provide software
- provide education

Internet shop

P A G A N I N I

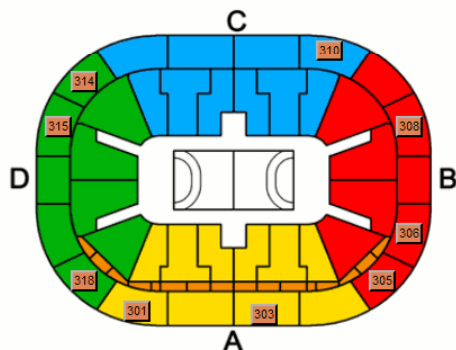


HOME

By date By venue

16.01. Fri	17.01. Sat	18.01. Sun	19.01. Mon	21.01. Wed	22.01. Thu	24.01. Sat	25.01. Sun	27.01. Tue	29.01. Thu	30.01. Fri
---------------	---------------	---------------	---------------	---------------	---------------	---------------	---------------	---------------	---------------	---------------

Date	Time	Day	Venue	Event	Seats available (for online purchase)	Price categories (HRK)	
27.01.2009	16:00	Tue	Zagreb	3A-3B, 2A-2B, 1A-1B	46	200/400	Select >>
27.01.2009	20:00	Tue	Zadar	3C-3D, 2C-2D, 1C-1D	2828	150/300	Select >>



Date: 27.01.2009, Tuesday
Event: 3A-3B, 2A-2B, 1A-1B
Venue: Zagreb
Seats available: 46 for online purchase
Sector/price: Sector: 308; Price: 200 (available: 5)
Quantity of tickets: 2 Add to shopping cart >>

SHOPPING CART

Date	Time	Day	Venue	Event	Sector	Price	No. of seats	Seats	Amount	
16.01.2009	20:00	Fri	Spaladium Arena	CRO-KOR / ESP-KUW, SWE-CUB	209	300	2		600	Delete
27.01.2009	16:00	Tue	Zagreb	3A-3B, 2A-2B, 1A-1B	308	200	2		400	Delete
							Total:	4	1000	

Continue >>

INFO PHONE
(0-24h):
+ 385 1 333 0 350



Developed by:
DEKOC



More events on
ulaznice.hr



Internet shop

PAGANINI - Mozilla Firefox

Paganini - internet / intranet ticketing service - your front row seats

hrvatski / English

PAGANINI

ULAZNICE.HR

HOME

Entering purchaser's data

Note: data marked with asterisk (*) are mandatory

If you want to generate an invoice for companies please fill in the following data:

Name:* Darko	Company name:
Surname:* Homar	Tax no.:
Street and address:* Trg kralja Zvonimira 14	
City:* Koprivnica	
Postal code:* 48000	
Country:* HRVATSKA	
Phone:* 111	

Please pay attention when entering your e-mail address because all information concerning ticket purchasing will be delivered via e-mail.

E-mail:* darko.homar@dekod.hr E-mail (2nd time):* darko.homar@dekod.hr

Shipping address

Choose:

shipping address is the same as the previously typed purchaser's address



I want to type an alternative shipping address

Payment type

Choose:

Bank account payment (Croatian kunas payment order or foreign currency bank transfer - Euros only or [Erste NetPay](#))

Credit card (Mastercard or VISA)

Terms & Conditions

TERMS & CONDITIONS OF TICKET SALES AND USE

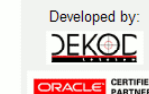
Sales channels

Tickets can be purchased via:

- Internet portal www.ulaznice.hr of DEKOD telekom d.o.o.
- retail outlets of TISAK d.d. in ulaznice.hr system
- venue's box offices (with sales about 5 day before the start of event)
- ticketing center for companies in location of DEKOD telekom d.o.o. for: - companies which tend to purchase a large amount of tickets - disabled persons in wheelchair with their companion/guardian

TISAK retail outlets:

INFO PHONE
(0-24h):
+385 1 333 0 350



More events on
ulaznice.hr



13.-17. LISTOPAD 2009, ROVINJ



Internet shop

PAGANINI - internet / intranet ticketing service - your front row seats

hrvatski / English

PAGANINI

HOME

ORDER INFORMATION

Order number: 62428

Name: Darko
Surname: Homar
Address: Trg kralja Zvonimira
House number: 14
Place: Koprivnica
Country: HR
Postal code: 48000
Phone: 111
E-mail: darko.homar@dekod.hr



TICKETS

#	Date	Venue	Event	Sector	Row	Seat	Price
1.	19.01.2009.	Pon Osijek	FRA-AUS, HUN-SVK, ROU-ARG	Istok A3 sredina dolje	7	67	150,00
2.	19.01.2009.	Pon Osijek	FRA-AUS, HUN-SVK, ROU-ARG	Istok A3 sredina dolje	7	68	150,00
							Tickets - total: 300,00
							GRAND TOTAL: 300,00

CREDIT CARD OWNER INFORMATION

Name:	Darko
Surname:	Homar
E-mail:	darko.homar@dekod.hr
Phone number:	111
Address:	Trg kralja Zvonimira 14
City:	Koprivnica
Postal code:	48000
Country:	HR

CHOOSE PAYMENT METHOD

- 
Mastercard
 Click "EC/MC" button to continue.
- 
VISA (with 3-D Secure™)
 To pay by VISA credit card, click "VISA" button to continue
 • [Verified by VISA - learn more...](#)

INFO PHONE
(0-24h):
+385 1 333 0 350



Developed by:
DEKOD
ORACLE CERTIFIED PARTNER

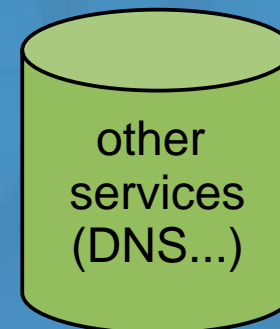
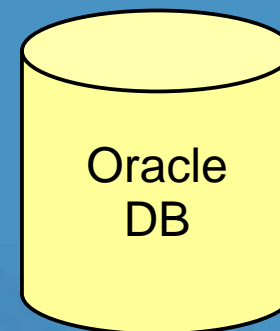
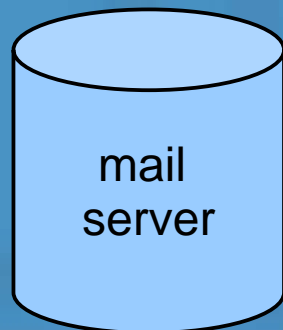
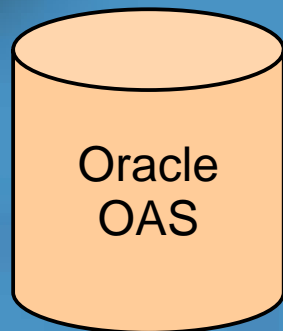
More events on
ulaznice.hr



13.-17. LISTOPAD 2009, ROVINJ



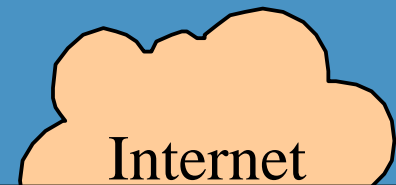
DEKOD's internet center



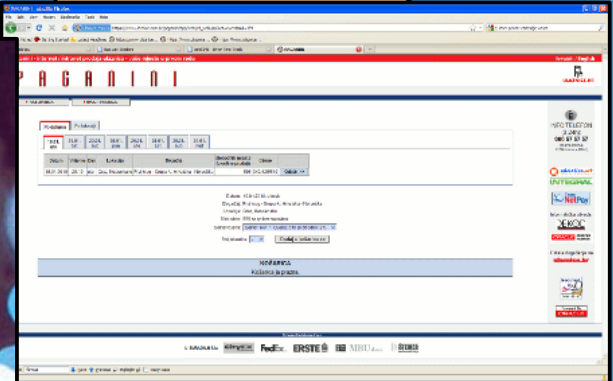
- Windows / Linux platform
(Oracle on Windows platform)
- Oracle Standard Edition
- partially virtualized
- connected to payment processors



Center for all sales channels



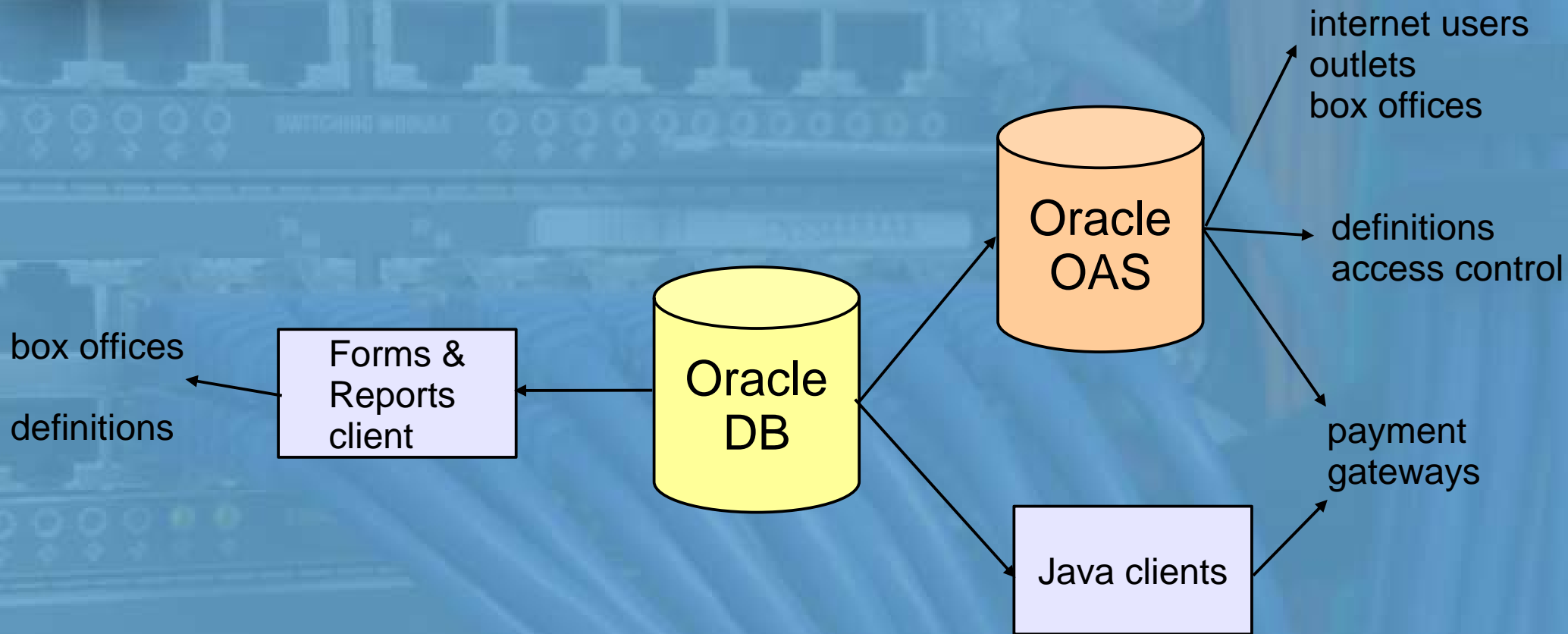
P A G A N I N I
ticketing center



System Architecture

- central ticketing database
 - supports all sales channels: internet, outlets, local box offices, ticketing center
- central application server
 - supports all sales channels
- local last minute sales databases & applications
 - not used, redundancy in case of comm. failure
- local access controls servers

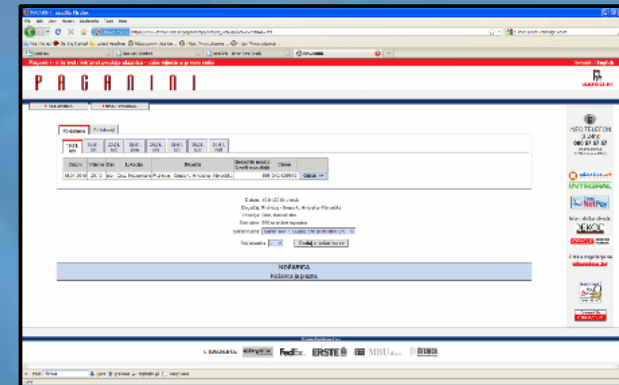
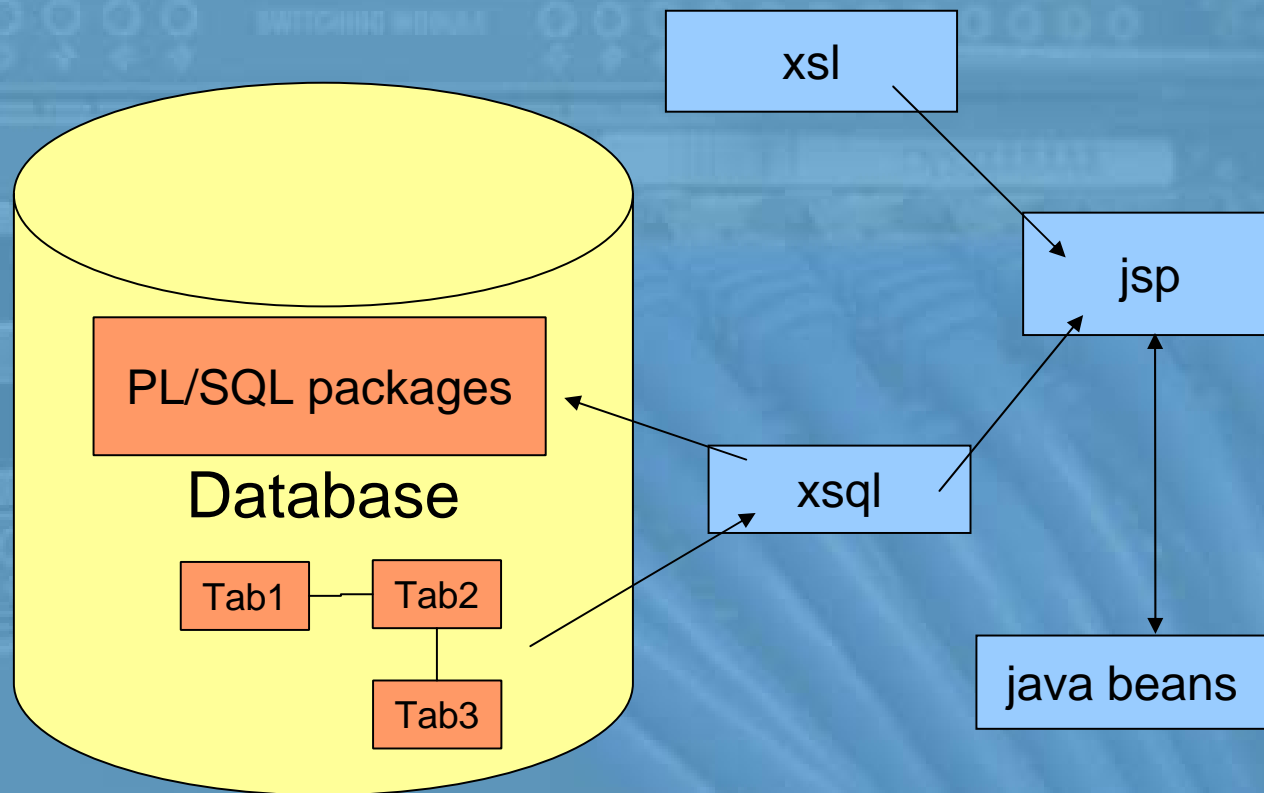
System Architecture



Software Architecture

- Database packages - contain business logic
- XML based applications
- OAS
 - xsql servlet - data querying, call business logic
 - xsl - user interface
 - jsp, java beans - controller, session variables
 - css - skin
 - javascript, jQuery

Software Architecture



XML-based DB access

- xsql servlet
- enables that DB is remote
- enables use of low cost (and low quality) connection to the Internet app center

XSQL-XSL Framework

192.168.2.50 - Remote Desktop

D:\Oracle\mtier\j2ee\home\applications\paganini\paganini\xsql_trg\centrala_demo\agencije\rep_age_poslovnica.xsql - Notepad++

```

1  <?xml version='1.0' encoding='windows-1250' ?>
2  <PAG connection="{@conn}" xmlns:xsql="urn:oracle-xsql">
3  <DEFIN>
4  <BLOCK name="PROMET">
5  <COL name="SBR" text="Šifra"/>
6  <COL name="IZNOS" text="Iznos"/>
7  <COL name="DAT_PRIR" text="Datum događaja"/>
8  <COL name="NAZIV" text="Naziv događaja"/>
9  <COL name="BR" text="Količina">
10 <ATTR name="align">right</ATTR>
11 <SUM expr="BR"/>
12 </COL>
13 <COL name="IZNOS" type="number" format="###,###.00">
14 <SUM expr="IZNOS"/>
15 <ATTR name="align">right</ATTR>
16 </COL>
17 </BLOCK>
18 </DEFIN>
19 <NASLOV>Pregled prometa prodajnog mjesta</NASLOV>
20 <xsql:query rowset-element="" row-element="">SELECT TO_CHAR(SYSDATE, 'dd.mm.yyyy hh24:mi') timestamp FROM DUAL
</xsql:query>
21 <xsql:query rowset-element="ZAGLAVLJE" row-element="">
22 SELECT
23     o.inicijali, o.ime,
24     o.posl_id, o.posl_naziv,
25     o.age_id, o.age_naziv
26 FROM
27     v_oper o
28 WHERE
29     o.inicijali='{@p_username}' AND o.lozinka='{@p_password}'
30 </xsql:query>
31 <xsql:query rowset-element="PARAMETRI">
32 SELECT 'Datum od' param, NVL('{@p_datum_od}', '-') value FROM DUAL
33 UNION ALL

```

Ln : 25 Col : 18 Sel : 0

XSQL-XSL Framework

192.168.2.50 - Remote Desktop

D:\Oracle\mtier\jZee\home\applications\paganini\paganini\app\sp2009_demo\web\xsl\generic_v2.xsl - Notepad++

```

80     f.submit();
81     }
82     </script>
83     <xsl:for-each select="//IMPORT/JS">
84         <script language="javascript" src="{@file}"></script>
85     </xsl:for-each>
86     <table border="0" width="100%">
87     <tr>
88     <td>
89         <form name="filter" method="post" onSubmit="form_submit();">
90             <xsl:if test="//PAGE/@title">
91                 <xsl:call-template name="PAGE_TITLE">
92                     <xsl:with-param name="title"><xsl:value-of select="//PAGE/@title"/></xsl:with-param>
93                 </xsl:call-template>
94             </xsl:if>
95             <xsl:call-template name="INCLUDE_BEFORE"/>
96             <xsl:if test="DEFIN/PAGE/FILT[@position='top' or not(@position)] or DEFIN/PAGE/ACTION[@position='top'
or not(@position)]">
97                 <table id="tbl_generic" cellpadding="2" cellspacing="1" border="0">
98                 <tr>
99                     <th colspan="{count(DEFIN/PAGE/FILT[@position='top' or
not(@position)])+count(DEFIN/PAGE/FILT[@position='top' or
not(@position)]/@prompt)+count(DEFIN/PAGE/ACTION[@position='top' or not(@position)])}">Akcije i parametri</th>
100                </tr>
101                <tr>
102                    <xsl:for-each select="DEFIN/PAGE/FILT[@position='top' or
not(@position)]|DEFIN/PAGE/ACTION[@position='top' or not(@position)]">
103                        <xsl:if test="@prompt">
104                            <th>
105                                <xsl:value-of select="@prompt"/>:
106                            </th>
107                        </xsl:if>
108                        <td class="filter">
109                            <xsl:apply-templates select="."/>

```

Ln: 32 Col: 6 Sel: 0

Framework choice

- let a thousand flowers blossom
- BC4J, Hibernate, JDBC, Toplink, Struts, xsql, web services, RMI, CORBA, SOAP, Axis, AJAX, jsp, servlet, php, xsl, java scripts, EJB, SOA, BEA Web Logic, Tomcat, OC4J, Spring, JDeveloper, Eclipse, ADF, JSF, UIX, Apex, XDB, Internet Explorer, Firefox, Netscape...
- browser oriented development since year 2000

Simplicity

- very short learning curve for new developers
- very adjustable to customer needs
- easy deployment and administration
- easy to incorporate new web features