NFC: The New Dimension of Mobile Ticketing and Access Control

Herbert Pamminger

Vice President, Business Segment Airport & Shopping Centers

Hagenberg, March 20, 2007

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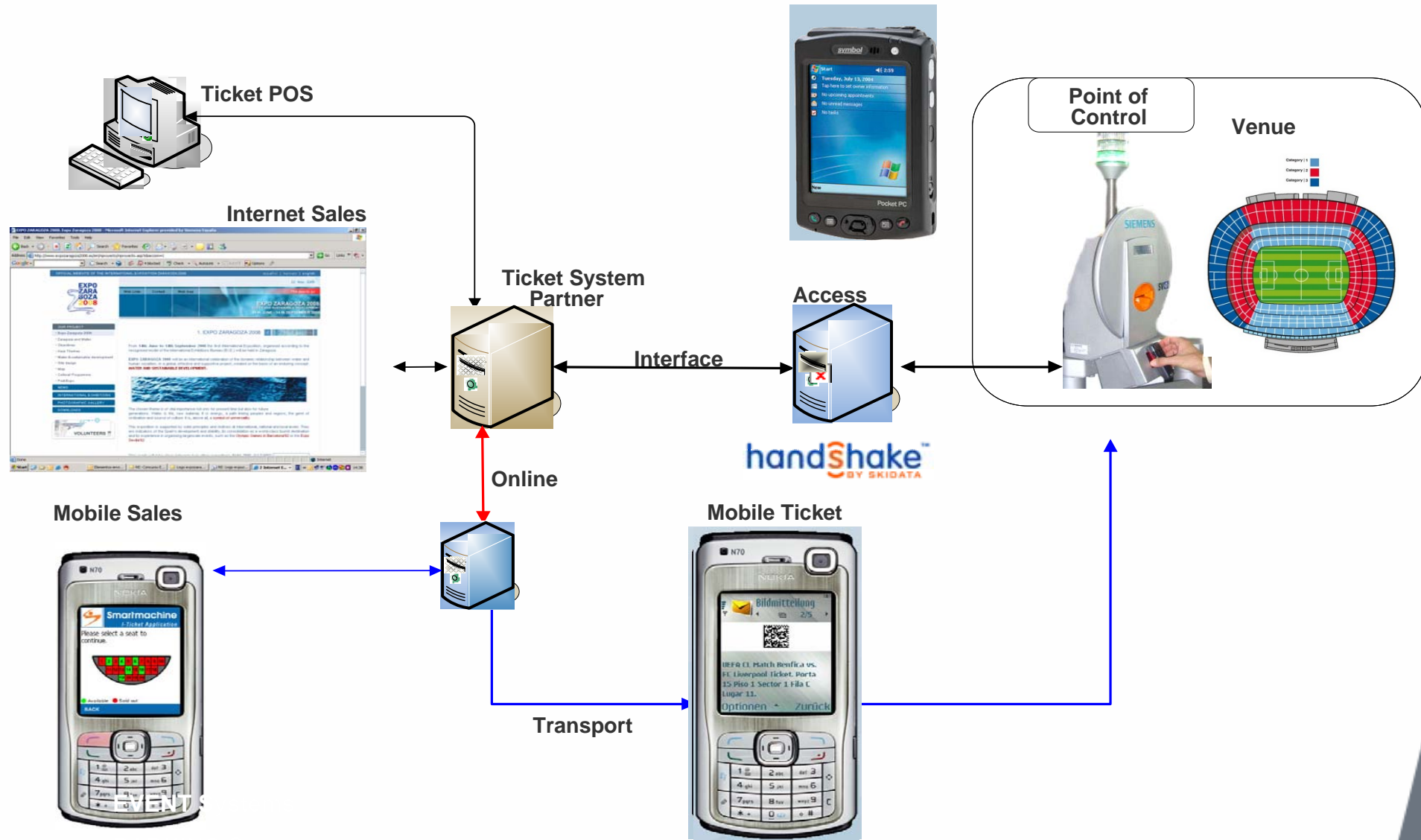KUDELSKI GROUP

SKIDATA Group – Who We Are

1977 **SKIDATA founded**
First SKIDATA™ automated ticketing system for ski resorts

1985 **Market branch-out into Car Park Management systems**

1991 **Entry into Event Access market (trade fairs and exhibition centres)**

1997 **Expansion into Fairs/Arena/Amusement segment**

2001 **New 100% owner: Swiss-based Kudelski Group**

Today **Leading worldwide provider of IT-solutions for ticketing, People & Car Access management**

Why Mobile Ticketing?

- **Enhanced convenience** for visitors and venue operators
  - Mobile = intelligent, reusable personal item
  - High market saturation
  - Suitable for targeted short-term marketing activities
  - Easy interaction & instant response – anywhere, any time
  - Fast, cost-saving ticket delivery

- **Security & fraud prevention**
  - Hardware-based secure element prevents copying
  - Mobile device well guarded by owner; rarely shared
  - Ticket permissions can be easily blocked
  - Mobile Ticketing ordering & use enhances security through personalisation (e.g. hooliganism prevention …)

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How does Mobile Ticketing fit into the picture?

Ticket POS

Internet Sales

Ticket System Partner

Access

Point of Control

Venue

Interface

handshake BY SKIDATA

Online

Mobile Sales

Mobile Ticket

Transport

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Mobile Ticketing Methods
SMS, Bluetooth

- **Mobile Phone Texting (SMS)**

- **PRO**
    - > Mobile flexibility: ticket booking from anywhere
- **CONs:**
    - > Only pre-booking; no machinereadable ticket on device (relation to physical data carrier requ.)
    - > Complicated procedure
    - > Low acceptance
    - > Commercially unsuccessful

- **PROs**
    - > Widely used standard; well accepted
    - > High data transfer rate
    - > Security (protocol level)
- **CONs:**
    - > Separation over short distances impossible (Long-range ≤ 10m)
    - > Unsuitable for ticketing

Mobile Ticketing Methods
SKIDATA™ 2-D Barcode Ticketing

- **Pre-stage to more versatile NFC technology**

- **Benefits**
  - > Mobile flexibility & security
  - > Immediate proximity to reader allows for separation (touch&go) with limited usability
  - > Machine readable ticket on mobile
  - > Reuse of existing infrastructure on mobiles possible

- **Reference installations**
  - > **Fairs:** CIEC Beijing (CN)
  - > **Stadiums:** Aston Villa ▪ Benfica Lisbon ▪ Austria Wien ▪ Rapid ▪ Dubai WTA & ATP Tournaments '07
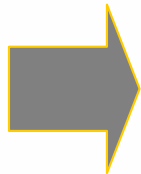 - > **Amusement:** Legoland ▪ Efteling ▪ O2 Music Flash concerts

Mobile Ticketing
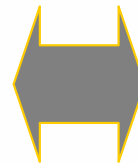## SKIDATA™ Direct to Access (DTA)

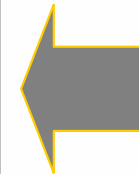| Customer	Internet, Call Centre	Point of Access	Customer

Direct Access Portal (DAP)

Personal Account

Booked Access

Booking Engines

- Stadium
- Mobile
- Ticket Office

Access Systems

Customer logs into Direct Access Portal

Customer selects from available booking methods

Booked tickets are deposited at entrance gate for customer

Customer is identified by permission

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NFC: Functionality is the Key

NFC-enabled
Mobile Phone

Full
Smartcard
Security

Payment - Mobile Transactions

Smart-card

Smart-card

Access and Ticketing

SmartPoster

Mobile Ticketing Methods
NFC: A new World Standard!

Intuitive connection between devices:
Virtual Smart Interface

NFC Use Case: Sports Stadium

Example (vision for the future):
Allianz Arena, Munich, Germany
(Venue of FIFA World Cup 2006 Opening Match)

- **Capacity:** 69,000 seats
- **Ticketing:** GOB, T-Systems
- **Ticket Media:**
    - > Barcode tickets
    - > RFID (ISO 14443, mifare)
- **Hardware:**
    - > 105 standard checkpoints
    - > 14 special designed VIP checkpoints
    - > 73 Handheld Terminals
- **Clients:** MSG, Bayern München, 1860 München

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NFC Use Case (Vision): Sports Stadium

- **Event Ticketing**
  - Purchase tickets via NFC SmartPoster or directly
  - Transfer tickets to NFC mobiles of friends and family
  - Enjoy convenient admission through NFC gates

- **Payment**
  - Use integrated NFC payment throughout stadium (Concessions, catering/restaurants)
  - Pay parking fees at NFC pay-on-foot machines or at exit

- **Parking**
  - Use NFC device as parking permit for pre-paid/reserved parking (visitors, VIPs, staff)
  - Admission & parking on the same device
  - Get parking validation at concessions

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NFC Use Case (Vision): Sports Stadium

- **Information**
  - Get details on upcoming games/events, etc. (NFC SmartPosters, Info Terminals)
  - Download multimedia content (ring tones, fan photos, video streams, etc.)
  - Receive dynamic information (club news, occupancy status, parking directions, etc.)

- **Ticket Tracking**
  - Enhanced security through personalisation
  - Lost/stolen NFC tickets can be blocked/erased instantly

- **CRM, Loyalty Marketing ("Living Ticket")**
  - Collected consumer behaviour/preference data can be used for targeted marketing
  - Season pass holders can be contacted directly (promotional messages, offers,....)

NFC
Ideas and Roadmap

- **Smart Posters**

- **'Combo packages', e.g.–**
  - **Airline Ticket + Airport Parking + Hotel**
  - **Concert Ticket + Parking**
  - **Match Ticket + Public Transpport + + Payment @ stadium**
  - **etc.**

SKIDATA & NFC: Where We Are Headed
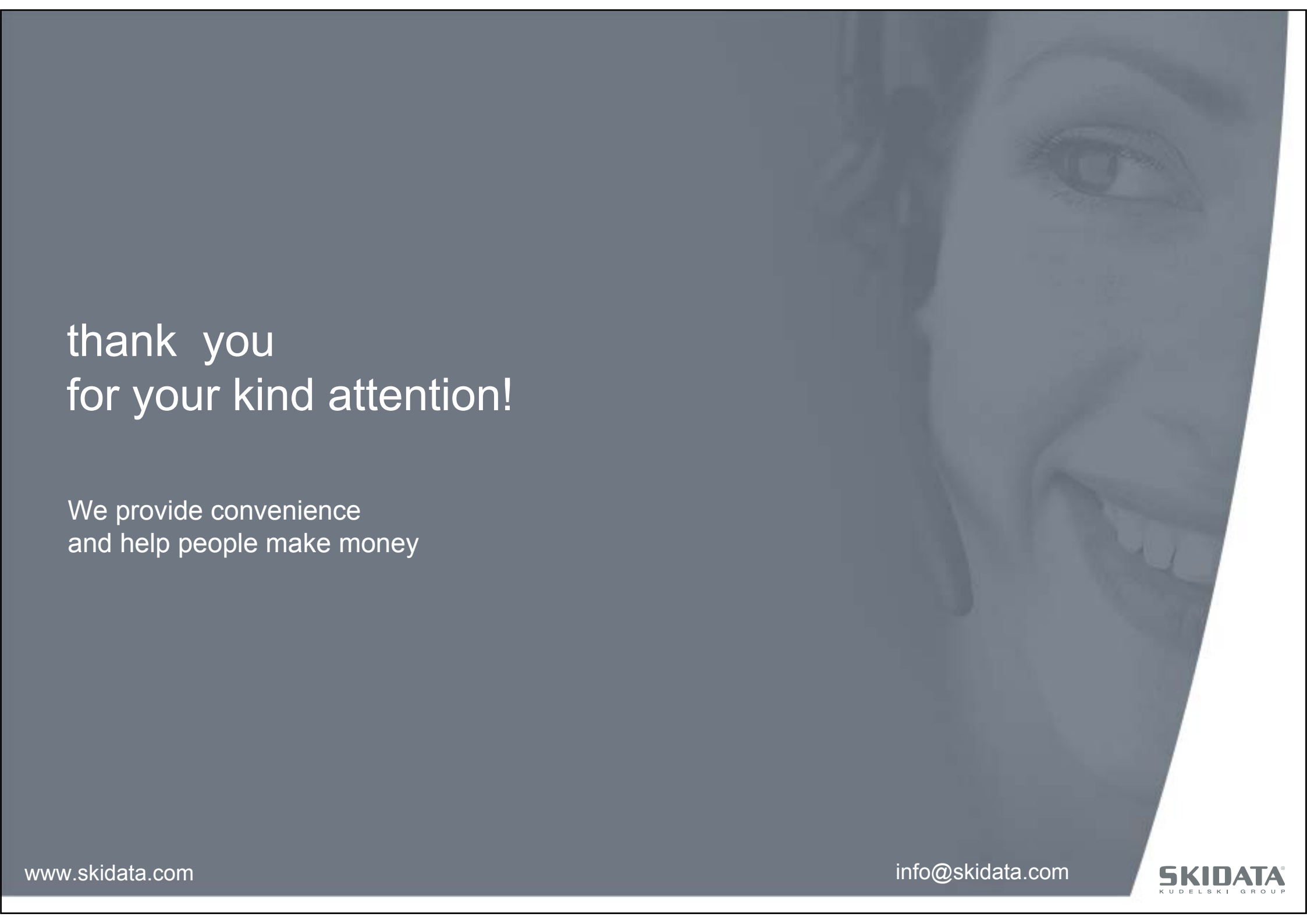
**Match Ticket
1959**

**NFC
Match Ticket**

As NFC standards develop...

- **Integrate NFC convenience across multi-applications**

  > Offer Bundled Solutions for end consumers

  > Ticket readers/coders (desktop coders, gate terminals, etc.)

  > Integration of NFC pay devices (attended pay stations, pay-on-foot terminals, etc.)

- **Increase industrial design efforts** towards intuitive usability of NFC applications in an unattended mode

- **Set up NFC trials** to qualify NFC technology in its various application settings

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SKIDATA & NFC: Where We Are Headed

SKIDATA NFC Applications will serve many business segments:

- Stadia/Arenas
- Fairs/Exhibition Centres
- Amusement Parks/Attractions
- Airports
- Shopping Centres
- Professional Car Park Operators
- etc.

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thank you
for your kind attention!

We provide convenience
and help people make money

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