Multimedia Convergence & ACCI Sector Overview

Philippe Lambinet
General Manager, Home Entertainment & Displays Group

ACCI Focus Applications

- Automotive
- Computer & Communication Infrastructure
- Home Entertainment & Displays

Leveraging Technology R&D / Multimedia Convergence
ACCI Revenues

ST Q110 Sales: $2,325M

ACCI Q110 Sales: $909M

* See appendix
** Includes Imaging business

ST Driving Multimedia Convergence

Key Drivers
- Services
- User interface
- Low-power

Key Enablers
- Leading positions in all convergence markets
- Low-power process roadmap
- Broad system know-how

State-of-the-Art
CPU
Audio/Video
Encode/Decode
3D GFx
Networking

Set Top Box
Car Multimedia
Smartphone Netbooks
TV
Automotive Market Growth Factors

More Cars, More Electronics

CAGR 2009-2016:
- Cars: 6.2%
- Electronics: 8.5%
- Silicon: 10.2%

- Electronic ignition
- Central locking
- Car radio
- Electronic gearbox
- Air conditioning
- Anti-lock brakes
- Seat heating
- Automatic mirror
- Navigation
- Adaptive cruise ctrl
- Airbags
- Stability control
- Xenon light
- Night vision
- Telematics
- Bluetooth
- Start/stop
- Hybrids
- LED lighting
- Pedestrian detection
- Lane change
- Driver assist maps
- Car 2 car
- Internet
- Brake-by-wire
- Steer-by-wire
- Electric vehicles

Source: Strategy Analytics

1975: 25M cars
1985: 32M cars
1995: 36M cars
2005: 64M cars
2015: 86M cars
ST: #3 in Global Automotive IC’s

Trends and Accomplishments in Automotive

**Trend:** Innovation driven by social responsibility
- Emissions, safety, connectivity

**ST Strategy:** Innovate with the leaders

**Accomplishments:**
- 32-bit MCU awarded by North American OEM for a new global transmission platform
- Chosen as a supplier of a next generation powertrain MCU platform with 55nm embedded flash for a major Tier 1
- 1st worldwide Li-Ion battery manager IC in a mass production plug-in hybrid vehicle
- Selected to develop a new radar baseband IC for adaptive cruise control for a US Tier 1

**Trend:** Large emerging markets with different needs and requirements

**ST Strategy:** Fast time to market at different feature and cost points

**Accomplishments:**
- Chosen to provide a full IC portfolio for Asia airbag platform of major European Tier 1
- MCU award by the fastest growing Chinese carmaker for all powertrain
- Steady #1 in China, doubling revenue in auto electronics every year from 2006 to 2011
- Gained 100% share of car radio tuner for two major Japanese Tier 1s for China
Computer & Communication Infrastructure

Leader in Digital and Analog ASIC

- CARTRIDGE: Print Heads, MFLD (TOP 1)
- HDD: Motor Controller & Head Drivers, BCD (TOP 2)
- PRINTER: Digital ASIC & SOC, HCMOS (TOP 3)
- NETWORK: BS RF & Active Cables Drivers, BICMOS (TOP 3)
Market Trends and Strategy in ASIC

- Cloud computing will fuel the next wave, generating increasing demand for (green) infrastructure and transforming all applications in cloud conscious clients.
- ASIC continues to be an effective win-win model for CCI customers and ST continues to be committed to it.
- The strategy: expanded product offering and flexible business model.
- Key achievements:
  - Significant design wins in the areas of communication infrastructure and printers in digital.
  - Launch of the first 32nm bulk platform for networking applications.
  - Expansion of the SPEAr family with the launch of the 1300 series.

CCI Growth Drivers

- BiCMOS ASIC for AOC and RF
- Digital ASIC for Networking
- PrintHeads for InkJet Printers
- Printer SOC and SPEAr eMPU
Home Entertainment & Displays

Consumer Electronic Trends

- **Analog switch-off**
  - Increasing demand for Pay TV and FTA satellite

- **New connected services**
  - Content aggregation – broadcast & IP
  - Services across all consumer devices

- **Exciting entertainment experience**
  - 3D stereoscopic TV
  - GUI technologies – 3D graphics, MEMS…
  - LED BLU

- **Environmental factors**
  - Power consumption
  - Green production

Source: iSuppli, IMS
### Our Application-Platform Evolution

<table>
<thead>
<tr>
<th>Gen. 1</th>
<th>Gen. 2</th>
<th>Gen. 3</th>
<th>Gen. 4</th>
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<tbody>
<tr>
<td>HD H.264 market enabler</td>
<td>Best performance / cost ratio</td>
<td>New services New UI Client / Server</td>
<td>Fully open connected platform internet TV</td>
</tr>
<tr>
<td>STi7100 710x, 520x</td>
<td>STi7105 711x, 712x, 720x 521x, 520x, …</td>
<td>STi7108 71xx, 52xx</td>
<td>STi7xxx</td>
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<tr>
<td>STi7103/FLI106xx</td>
<td>STi7104/FLI326xxH</td>
<td>FLI7510</td>
<td>FLI7xxx</td>
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<tr>
<td>Mass production Mass production</td>
<td>Mass production Samples now</td>
<td>Samples now In design</td>
<td>Production: 2010 →</td>
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</tbody>
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### HED H1 2010 Highlights

- **Gen. 2 based STB massively deploying**
  - Mass production started in June 2009
  - 55nm process with >10 products families
  - > 50 customers in production now
  - > 50% of ST total STB shipments from 2010

- **Gen. 3 getting ready for ramp up in 2010**
  - Gen. 3 introduced at CES 2010
  - Freeman/FLI7510 solution for DTV designed in at multiple partners
  - >20 partners enabled with STi7108 platform
    - Develop new category of STB & mediacenter
    - Develop new software for new services
      - RIA, GUI, gaming, mediaserver, …
Conclusion

ACCI Key Strengths

- **Powerful Technologies**
  - 545nm CMOS
  - BCD, BiCMOS
  - Microfluidics
  - Analog/RF

- **Broad/Deep Product Portfolio**
  - Multimedia convergence
  - Power management

- **Serving Market Leaders**
  - Innovative products
  - Excellent service / support

- **Flexible Business Models**
  - ASICs
  - Platforms
ACCI Strategy

- Expand market share
  - Leverage key strengths
  - Capture larger share of new markets / new product generations
  - Diversify / grow customer base

- Participate in market recovery
  - ACCI still significantly below pre-crisis level
  - Favorable market trends in targeted segments
  - Solid financial position is a competitive advantage

- Increased focus of R&D effort
  - Shared platform
  - Innovative ASICs business models
  - Collaborate with key customers, partners and research institutions

- Optimize manufacturing
  - Increase manufacturing efficiencies
  - Align capacity with demand
  - Accelerate development / move to new processes

- Improve profitability towards high single digit operating margin by the end of 2010 and in the teens in the mid-term

Key drivers to grow sales and profitability

- DTV
  - Networking
  - 32-bit MCUs for Auto
- Multimedia convergence
- SPEAr platform
- Automotive industry recovery
- Selected capacity expansion