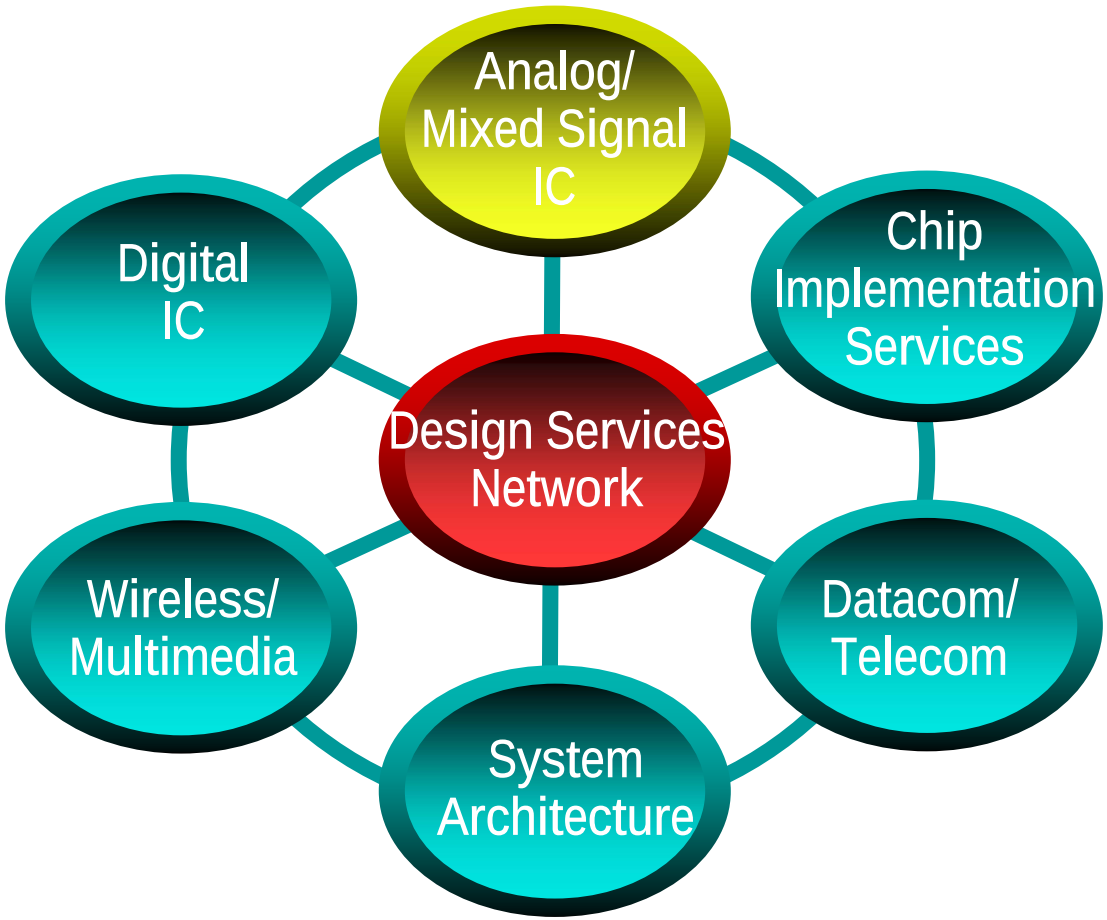
Analog / Mixed-Signal IC Design Services

Julien Ardelean Consulting

Design Services Collaboration Network



Design Companies

FRANCE
ITALY
GERMANY
ROMANIA

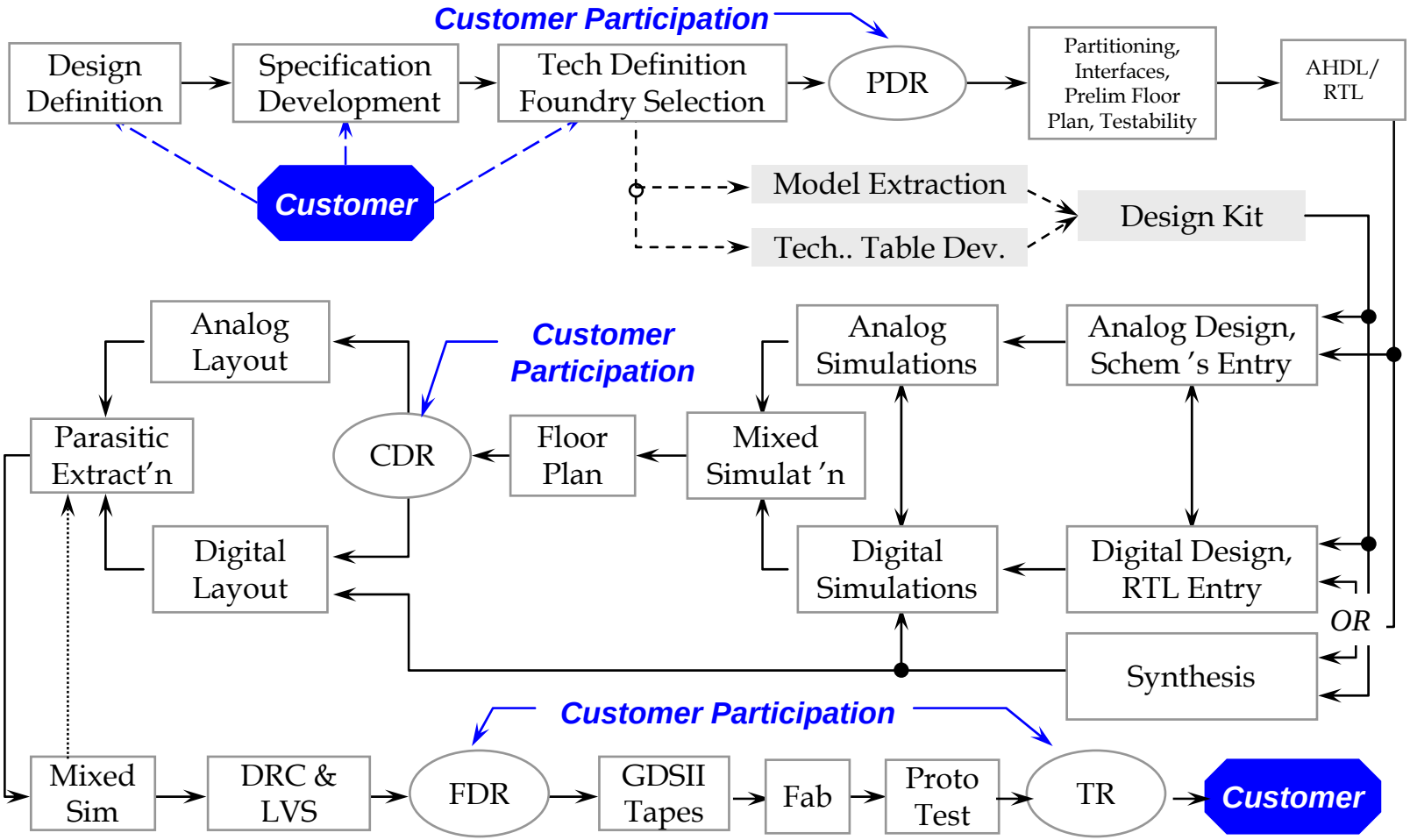
Mission Statement

- Provide world-class designs for **analog/mixed-signal** products
  - Examples: smart sensors applications, automotive applications, printer applications, telecom/multimedia applications, wireless applications, general purpose libraries, discrete components, ……
- World-class acquired design expertise for **smart sensors** applications

Analog/Mixed-Signal Design Services

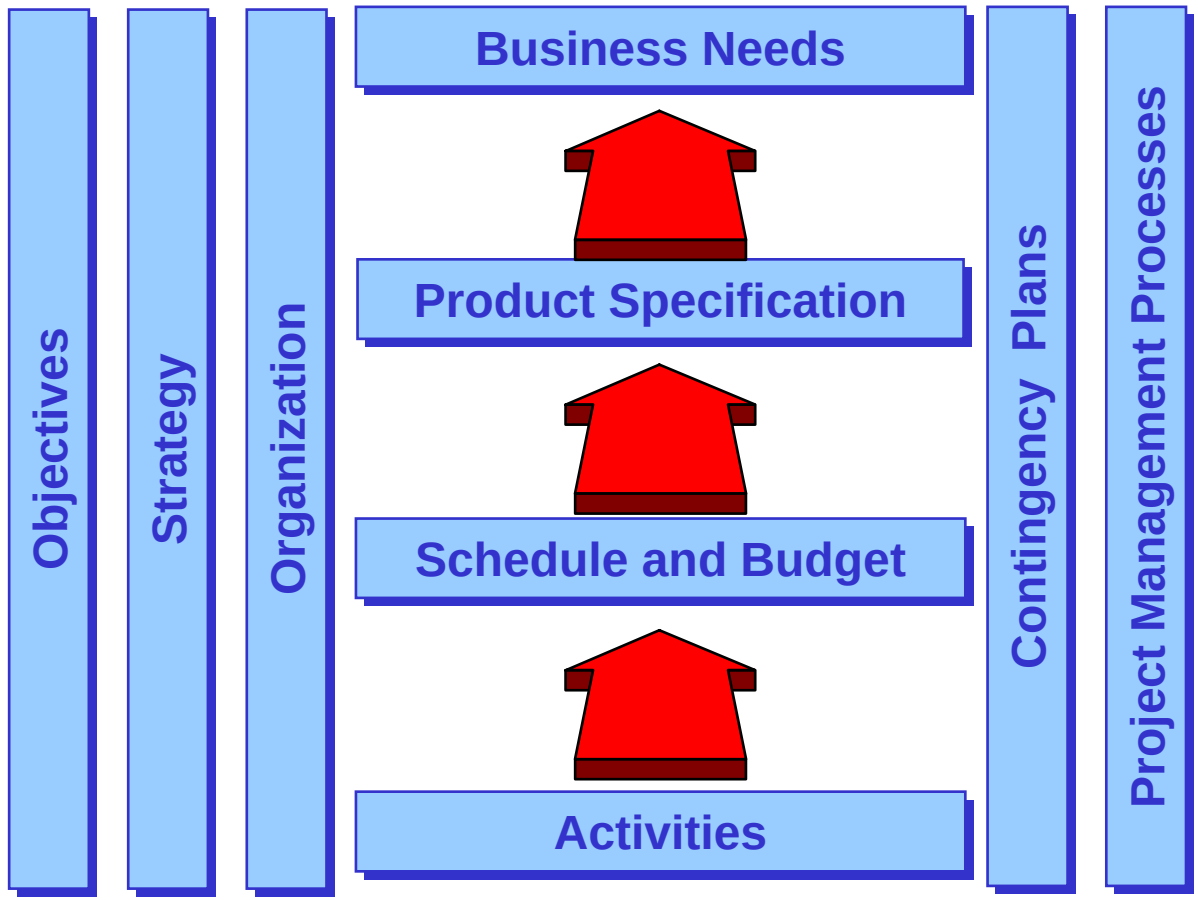
- Specialized in smart sensors / automotive products development
  - End-to-end product design
  - Smart sensors designs
  - Complex ASIC and SoC designs
  - Analog Macrocells for SoC designs
- Enhanced partnership with complementary Design Companies
  - Wireless/Multimedia
  - Wireline, Physical Interfaces
  - Printers
  - Digital IC
  - System Architecture

Mixed-Signal Design Flow



Project Management

Planning, **organizing** and **controlling** resources toward completing a series of activities, carried out against an agreed-upon schedule and budget



Time-to-Market Challenges and Time-to-Market Commitment

Success stories

The Pressure Sensor Interface IC for automotive applications

- automotive break system smart sensor
- for a foundry and third party customer

The Thermal Ink Jet Driver IC for printer applications

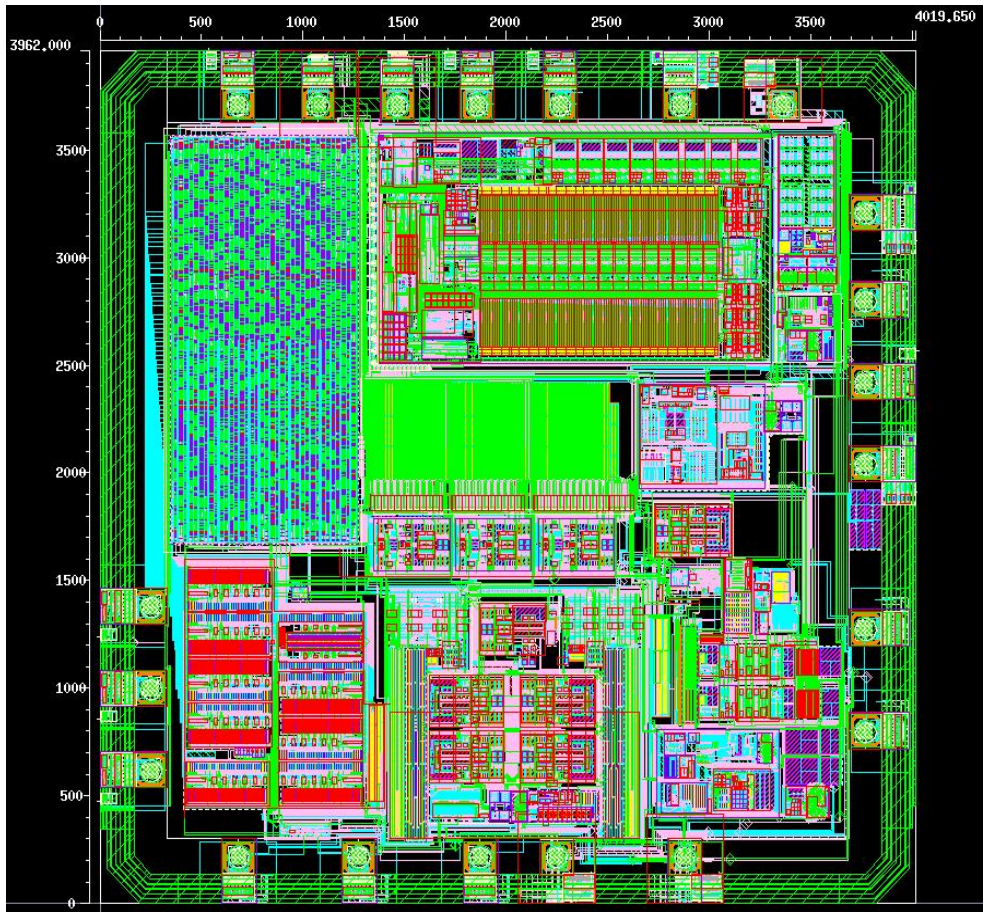
- low-cost ink jet printer head driver
- for a foundry and third party customer

The Spread Spectrum Clock Generator module for printer applications

- printer applications electromagnetic compliance solution
- for a foundry and third party customer

Pressure Sensor Interface IC

General considerations

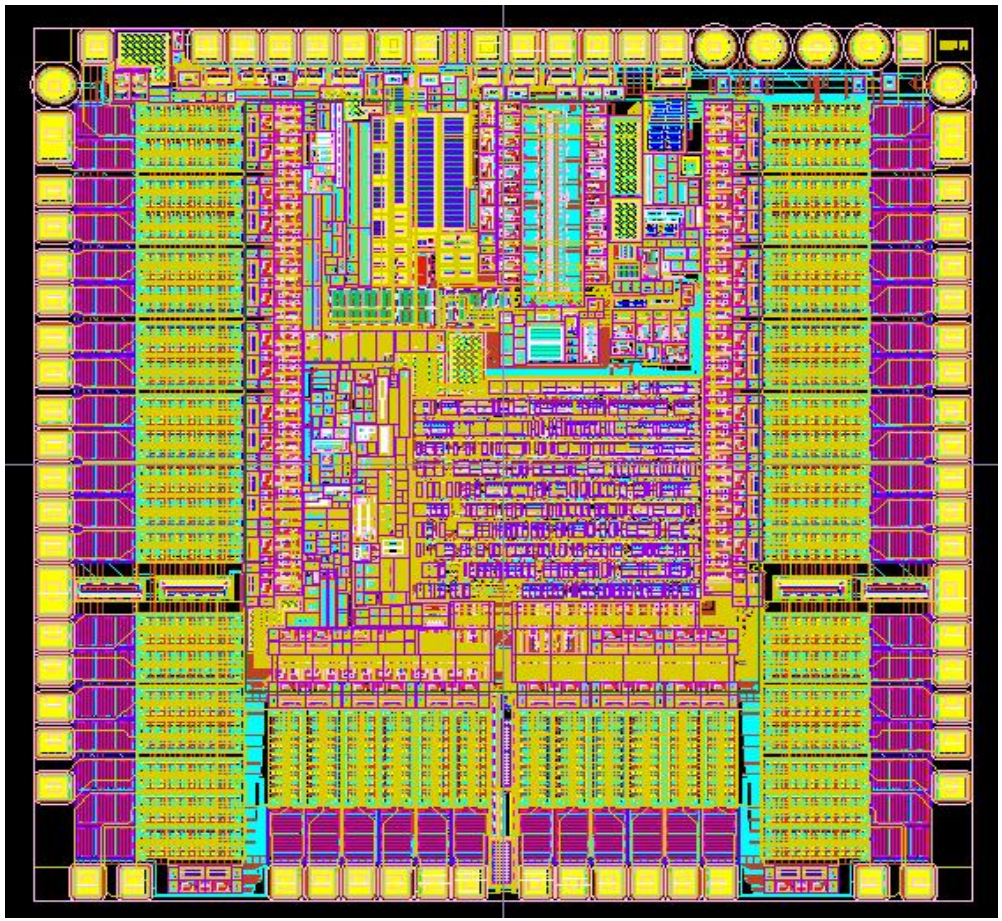


- Pressure Sensor Interface IC
  - High performance analog design
  - First pass success required (time to market)
  - #I/O, Die size constrained (cost target)
  - 15 months design time
- Key Integrated Features
  - Linearity: 1% (full-scale)
  - Hysteresis: < 0.1%
  - Total error: 1.5% (full-scale and entire temperature range)
  - Temperature range: -40°C...+135°C
- Chip profile
  - 4.0 x 4.2 sqmm die
  - 0.5 µm, HF5CMOS process

First pass silicon success; high customer satisfaction

Scooby Thermal Ink Jet Driver IC

General considerations

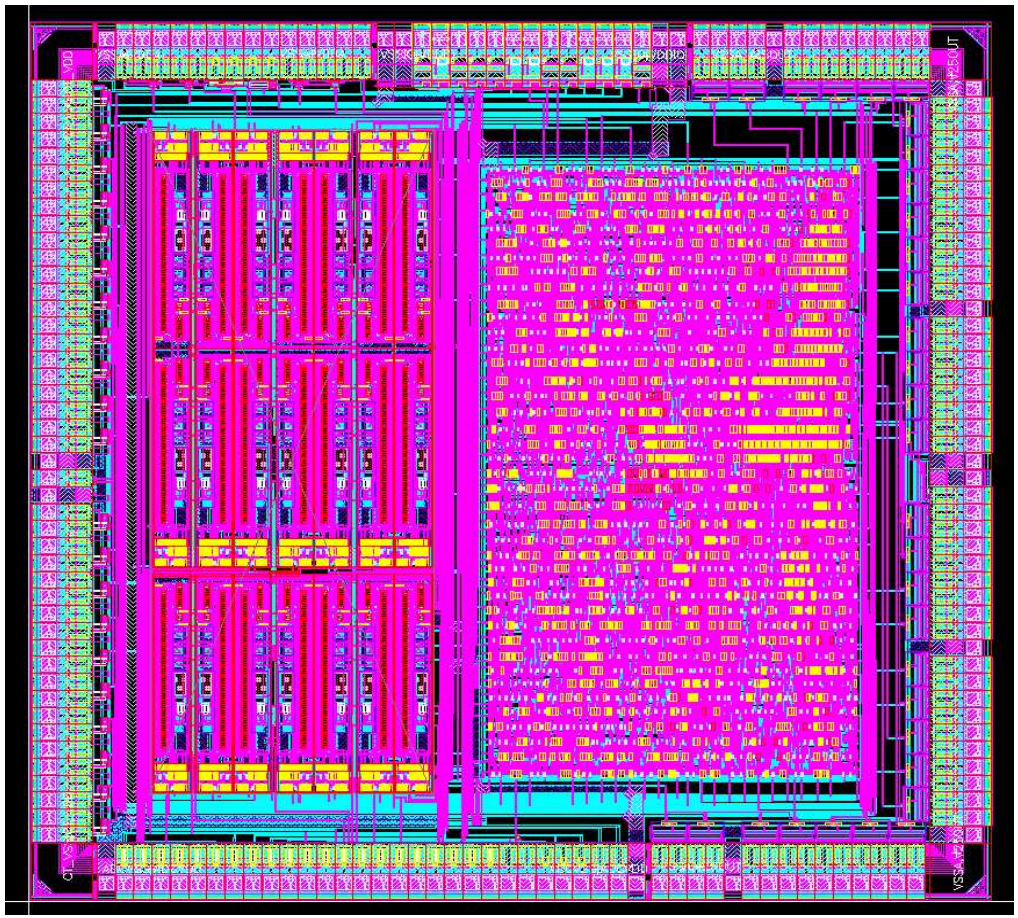


- Scooby TIJD IC
  - High performance analog design
  - First pass success required (time to market)
  - #I/O, Die size constrained (cost target)
  - 6 months design time
- Key Integrated Features
  - provides a lower cost pen driving solution
  - 48 nozzle resistor power drivers
  - 16V supply voltage
  - Temperature range: -25°C...+125°C
- Chip profile
  - 9 sqmm die
  - 0.5 µm, BCD3S process

First pass silicon success; high customer satisfaction

Biospace IC

General considerations



- Biospace IC
  - High performance analog design
  - First pass success required (time to market)
  - Die size constrained by #I/O
  - 3 months design time
- Key Integrated Features
  - including 20 Sigma-Delta 19bit A/D converters
  - low-noise inputs for wire chamber detectors
  - differential output drivers
  - Temperature range: 0°C...+70°C
- Chip profile
  - 35 sqmm die
  - 0.5 µm, BiCMOS process

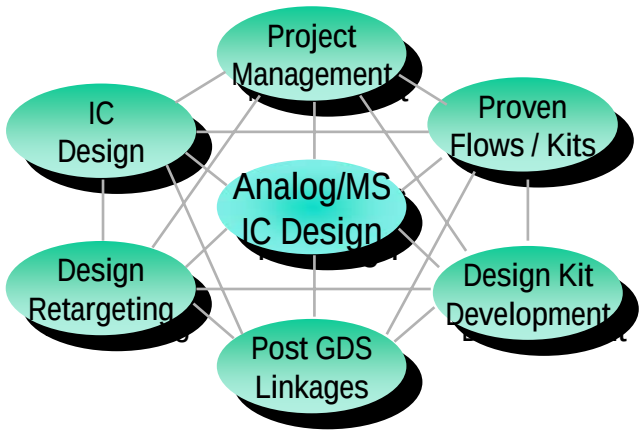
First pass silicon success; high customer satisfaction

Proven Process for Engagement and Delivery

Julien Ardelean Consulting provides…

- Rigorous delivery assurance and project management practices to ensure customer satisfaction
- Detailed Statement of Work and specifications
- Payments based on delivery to agreed specs and schedules
- Single focus for program management
- Established mechanisms for issue resolution

In Summary



Analog / Mixed-Signal IC Design Services

- **Broad Capabilities & Experience**
- **Growing Capacity of Rare Resources**
- **Analog/Mixed-Signal Experts**
- **Proven Track Record**
- **Customer Success Focused**

World-Class Design Capabilities to Time-to-Market Challenges