

# *Opportunities & Challenges of Licensing Programs in Operating Companies*

## **Moderator:**

**Ron Laurie**, Chairman, InventionShare; Managing Director, Inflexion Point Strategy

## **Panelists:**

**Bill Goldman**, Vice President, Intellectual Property, *NAGRA/Kudelski*

**Craig Mitchell**, President, *Invensas*

**Patrick Patnode**, President, Licensing & Technology Ventures, *GE Ventures*

**Stefan Tamme**, Vice President IP Strategy & Licensing, *Rambus, Inc.*

# KUDELSKI MAIN BRANDS AND ACTIVITY LINES

## INTEGRATED DIGITAL TV

### Core activities:

- Integrated content protection and multi-device user experience solutions to reach users at home and on the move
- Modular cost-efficient solutions to deliver pay-TV content securely over broadcast, Internet and connected devices
- Smart devices for digital TV including Conditional Access Modules and set-top boxes
- Watermarking technologies and solutions to protect media content against illicit redistribution



### Growth initiatives:

- Tailor-made cyber security solutions and services for enterprises, financial institutions, government administrations and media customers
- Development, protection and licensing of the Group's innovations
- Technology and services to support companies across all industries in securing their Internet of Things innovations



Intellectual Property

IoT Center of Excellence

## PUBLIC ACCESS

- Integrated access and management solutions for car parks, ski lifts, sports, entertainment and exhibition facilities



# HIGHLY RECOGNIZED TRACK RECORD OF INNOVATIONS

1951



Launch of NAGRA I, the first professional portable recorder

1968



Introduction of NAGRA IV, the most successful NAGRA in the world

1987



SKIDATA invents the first handsfree ski system

1989



CANAL+ adopts Kudelski's access control system for pay TV

1995



First digital TV access solutions

2006



Conditional access modules based on the CI+ standard are added to the Group's offering

2015



Kudelski Security launches the first proprietary solution to monitor Internet security

2016



Launch of NAGRA'S intuiTV, a cutting-edge user experience platform

# THE WORLD'S MOST PRESTIGIOUS AWARDS

THROUGHOUT ITS HISTORY, THE KUDELSKI GROUP HAS RECEIVED SOME OF THE WORLD'S MOST SOUGHT-AFTER AWARDS



**Emmy Award from the National Academy  
of Television Arts and Sciences for Outstanding Achievement  
in technical/engineering development**

# KUDELSKI LICENSING PROGRAMS

## Conglomerates



## Over The Top Television



Forbes Top 50 US Private Company

## Pay TV Suppliers

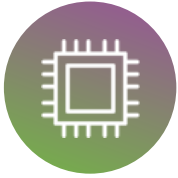


## Service Providers



## Connected Devices

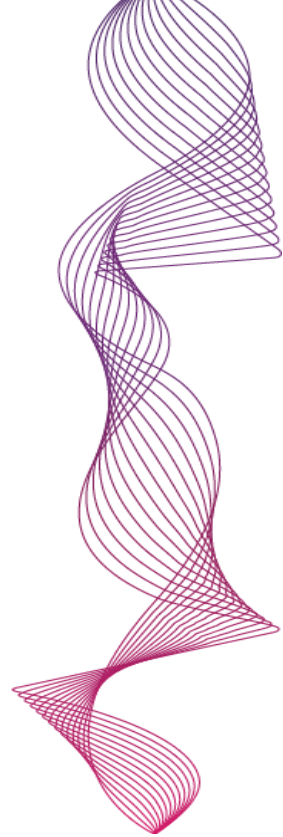




XPERI

# Xperi Corporate Overview

November 2017





## VISION

*We bring sensory experiences to life  
...sight, sound and beyond*

## MISSION

*We invent and deliver technologies  
that enable immersive experiences  
through smart devices*

**Enabling Extraordinary Experiences**

# XPERI Overview

Headquarters	San Jose, California, USA (Silicon Valley)
Global	27 office locations worldwide
Diverse Technology Portfolio	Semi packaging & interconnect, audio, imaging, connected radio
Innovative Talent	~700 employees, 450+ engineers, 30 PhDs with history of developing transformational technology
Compelling IP Portfolio	Robust patent portfolio with more than 5,000 patent assets
2017 Financials	Q317 Revenue: \$88.5M; Operating Cash Flow: \$40M FY17* Revenue: \$330-\$385M; Operating Cash Flow: \$110-155M



# XPERI

## Portfolio of Trusted Brands



Audio Technology  
Solutions



Imaging and  
Computer Vision  
Solutions



Automotive Audio,  
Data, and Digital  
Radio Broadcast  
Solutions



Semiconductor  
Packaging and  
Interconnect  
Technology &  
Solutions



Licensing  
Semiconductor  
Intellectual Property

# Comprehensive Technology Portfolio Addressing Various End Markets



## Automotive

Intelligent sensor modules  
Driver monitoring systems  
Image Quality  
Automotive smart vision  
Small Machine Learning

ZiBond® & DBI® in Image Sensors and MEMS

DTS-*HD*® Audio Codec  
HD Radio™  
DTS Hybrid Radio  
DTS Neural:X™  
DTS Audio Pre-Processing



## Mobile

Face recognition  
Object recognition  
Face beautification  
Biometrics  
Small Machine Learning  
Image Processing Unit  
High Dynamic Range  
Electronic Image Stabilization  
Fast Focus

Semiconductor packaging  
ZiBond® and DBI® in Image Sensors, RF and MEMS  
DBI® in 3D memory

DTS-*HD*® Audio Codec  
DTS Headphone:X®  
DTS Sound™ Post-Processing  
DTS Play-Fi® Wireless Audio



## IoT

Object recognition  
Biometrics  
Small Machine Learning

ZiBond® in MEMS  
DBI: 3D integration of sensors & computing

DTS Audio Codecs  
DTS Play-Fi® Wireless Audio  
HD Radio™  
DTS Hybrid Radio  
DTS Audio Pre-Processing



## MR/AR/VR

Immersive Video  
Object Recognition  
Display (LTM, GD)  
Small machine learning  
Object recognition  
Gaze tracking  
IRIS recognition  
Head tracking  
Depth mapping

ZiBond® & DBI® in Image Sensors, MEMS, Displays

DTS Headphone:X®  
DTS:X™ Audio Codec



## Consumer Electronics

Image Processing  
High Dynamic Range  
Small Machine Learning  
Immersive Video

Semiconductor packaging  
ZiBond® & DBI® in Image Sensors, RF and MEMS  
DBI® in 3D memory

DTS-*HD*® Audio Codec  
DTS:X™ Audio Codec  
DTS Headphone:X®  
DTS Play-Fi® Wireless Audio  
HD Radio™  
DTS Sound™ Post-Processing

# The Result: XPERI is in Billions of Devices Today

DTS audio technologies



Over 2 billion devices

FotoNation® imaging hardware and software



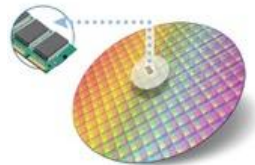
Over 2.9 billion devices

ZiBond® and DBI® interconnect technologies



Over 1 billion smartphones

Tessera packaging/  
interconnect IP



Over 100 billion chips

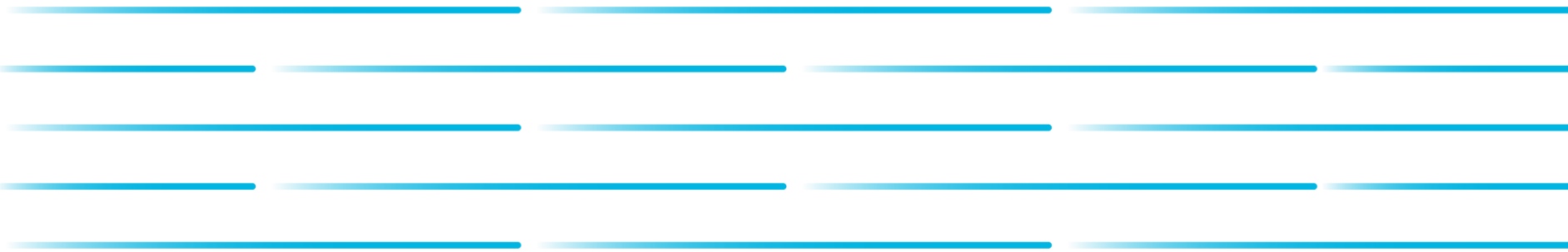


# Licensing & Technology Ventures

November 15, 2017

LES Silicon Valley

Use this second line if additional confidentiality disclosure information is required.



# How we work



Investing



New  
Business  
Creation



Technology  
Licensing



Market  
Transformation

A multimodal innovation platform



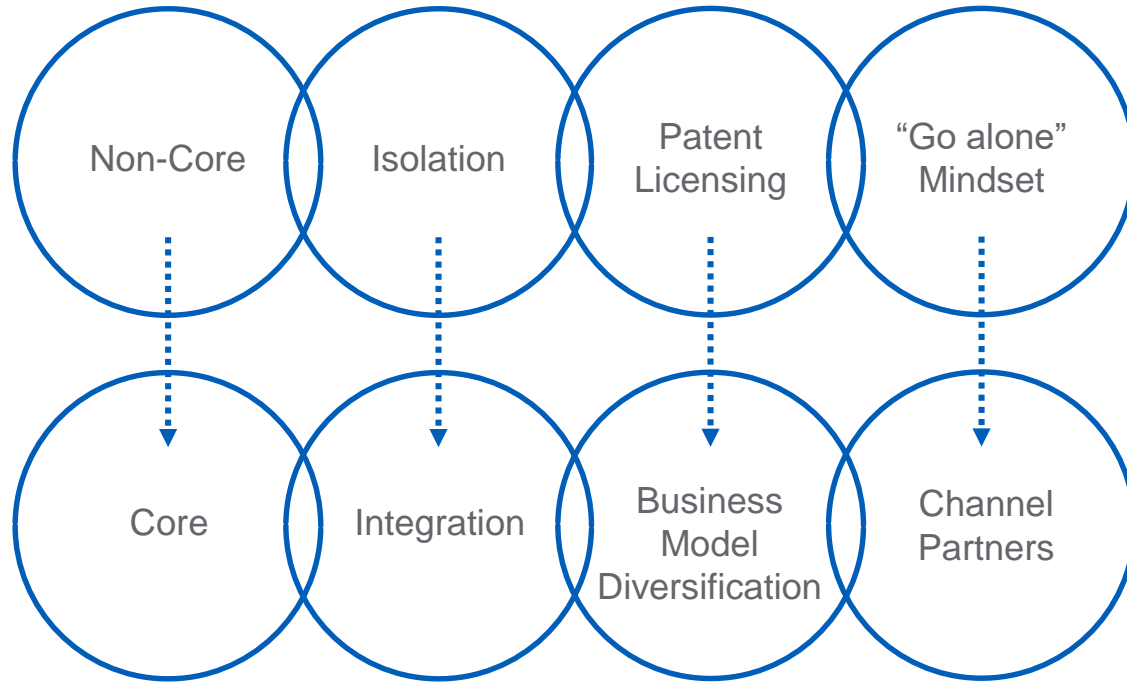


# Technology Licensing

We provide access to GE's vast technologies and business acumen to accelerate our partners' innovation.



# Technology Licensing – Our Approach



# Technology Licensing

## – How we get it done







# Rambus Introduction

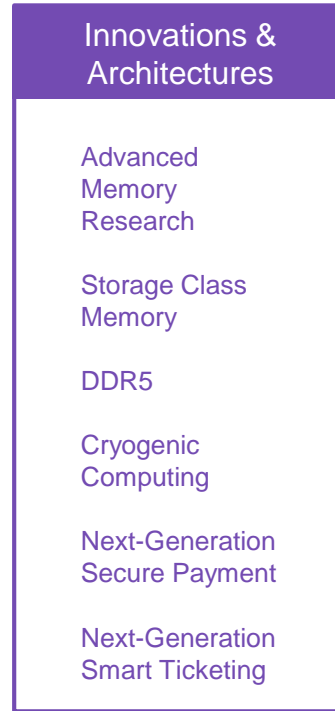
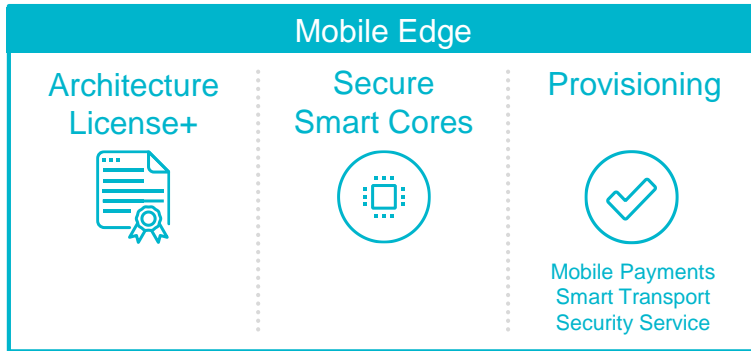
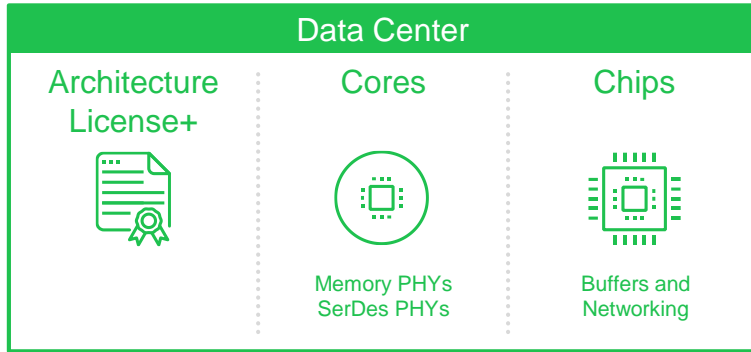
Stefan Tamme  
VP of IP Strategy & Licensing

November 15, 2017



**Rambus**

# Rambus At-a-Glance



## Corporate Facts

- NASDAQ: RMBS, Inc. in 1990; IPO 1997
- Headquartered in Sunnyvale, CA
- Operations throughout North America, Europe & Asia
- Q317 Revenue: \$99.1M
- 2016 Revenue: \$336.6M
- ~800 employees
- ~2,500 patents & applications

## Markets Served

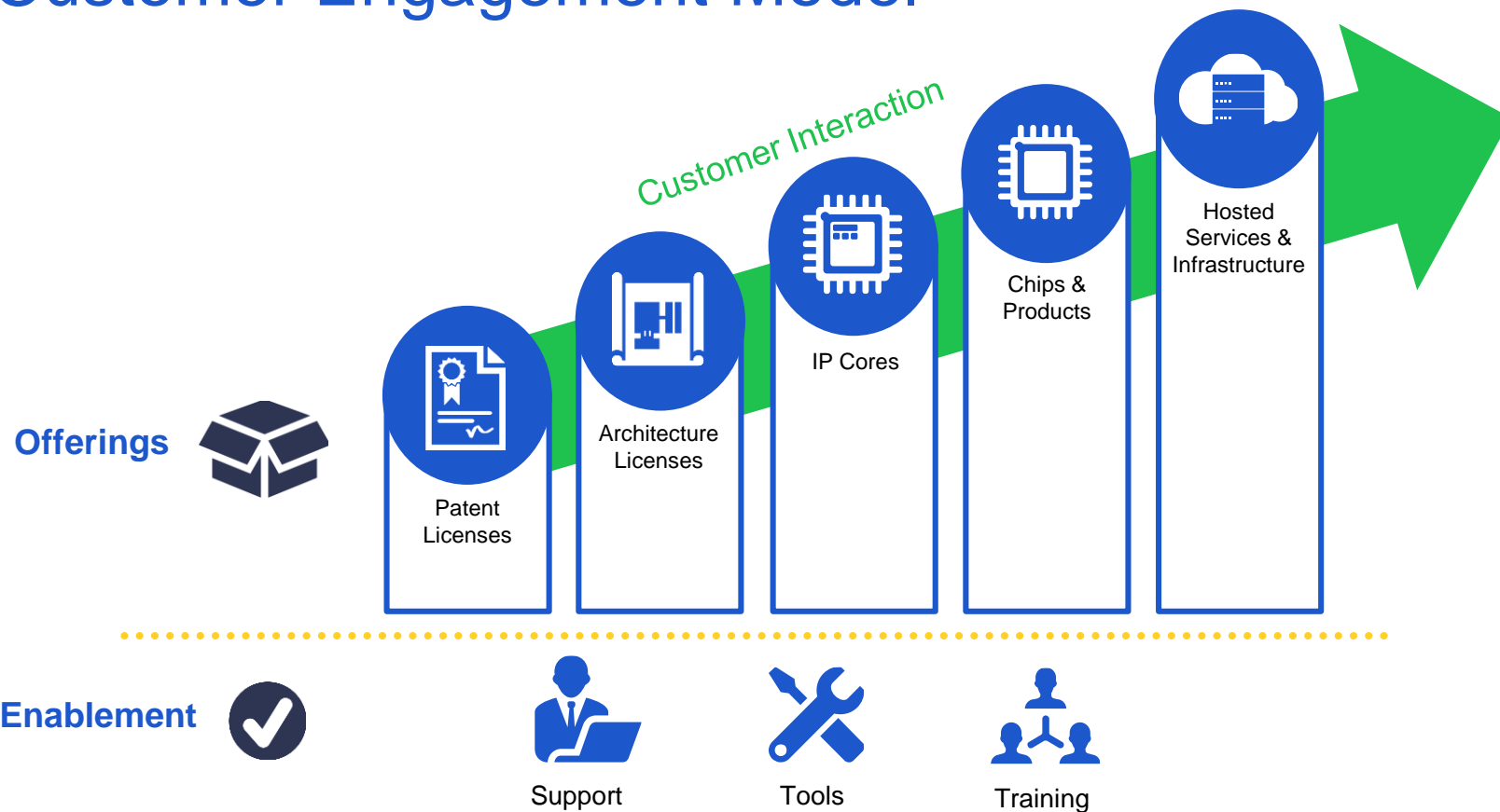
### Data Center

- Acceleration + lower power
- System-level architectures
- Innovative products to support needs

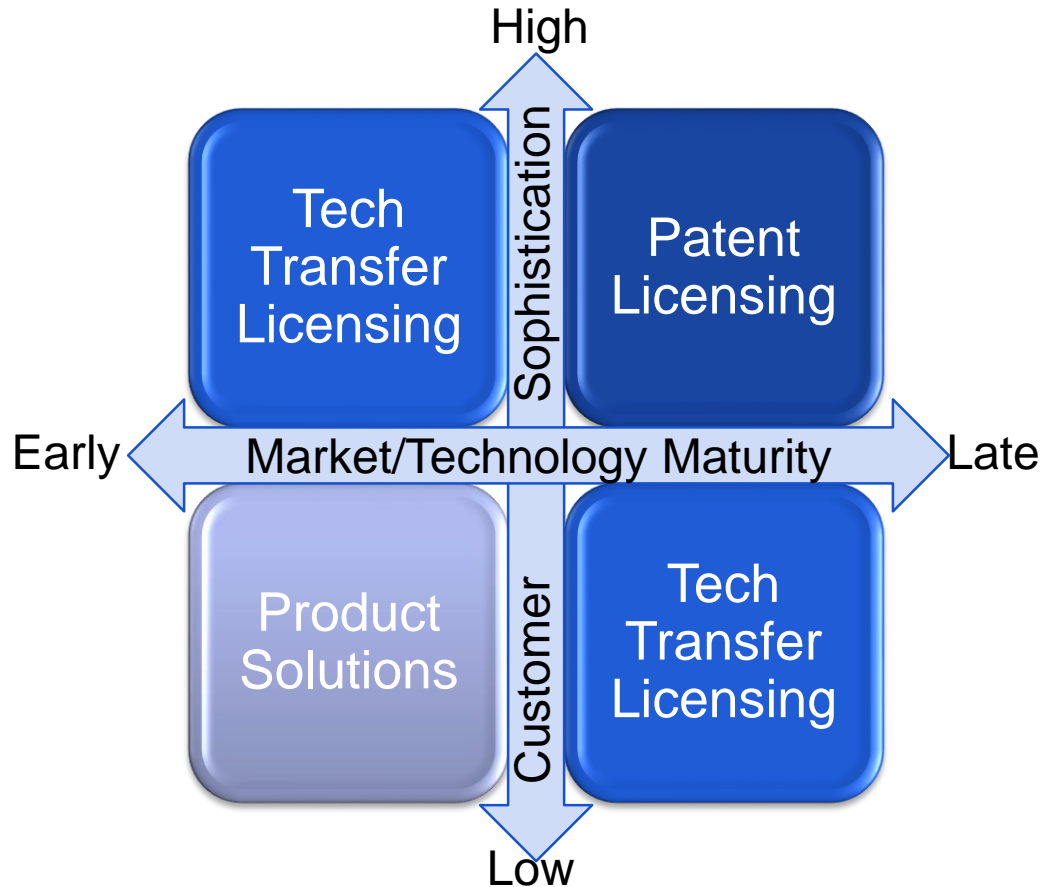
### Mobile Edge

- Secure endpoints = secure data
- Hardware root-of-trust
- Value and monetization for end-user services

# Customer Engagement Model



# The Right Offering for the Right Opportunity



# Licensing Programs and Example Customers

## Memory Customers



## SoC Customers\* (Memory Controllers & Serial Links)



## DPA Countermeasures Customers\*

