

Trans New Technology Company Introduction

About TNT

Company profile

- Management team
 - Mitsunori Kimura (CEO, chairman of board, co-founder)
 - Master's degree from The University of Electro-Communications
 - Hiroki Nakano (CTO, board member, co-founder)
 - Master's degree from Kyoto University
 - 20-year experience for Internet Protocol stacks
 - Hironori Ikura (board member, co-founder)
- Miscellaneous data
 - Established: November, 1990
 - Capital: 59,750,000JPY
 - Employee: about 20 people

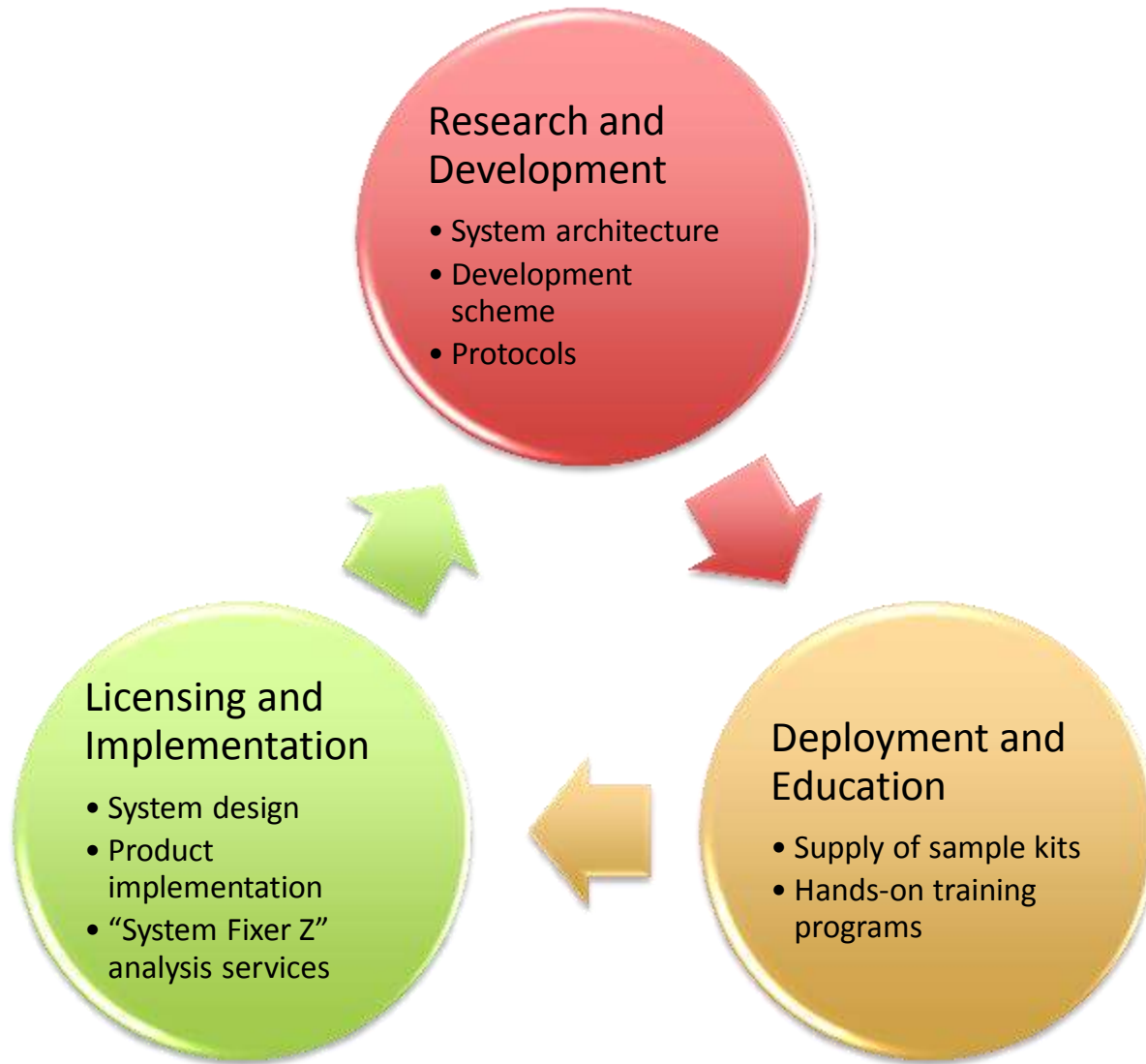
Locations

- Headquarter (Tokyo)
 - KY Bldg. 8F, 5-14-4 Nishinippori, Arakawa, Tokyo 116-0013 JAPAN
 - 03-5604-1188(Tel), -1199(Fax)
- Kyoto Laboratory
 - Sumitomo Seimei Kyoto Bldg. 8F
62 Tukiboko-cho, Shinmachi Higashi-iru, Shijo St., Shimogyo, Kyoto 600-8492 JAPAN
 - 075-213-1200(Tel), -1220(Fax)
- Fukuoka Branch

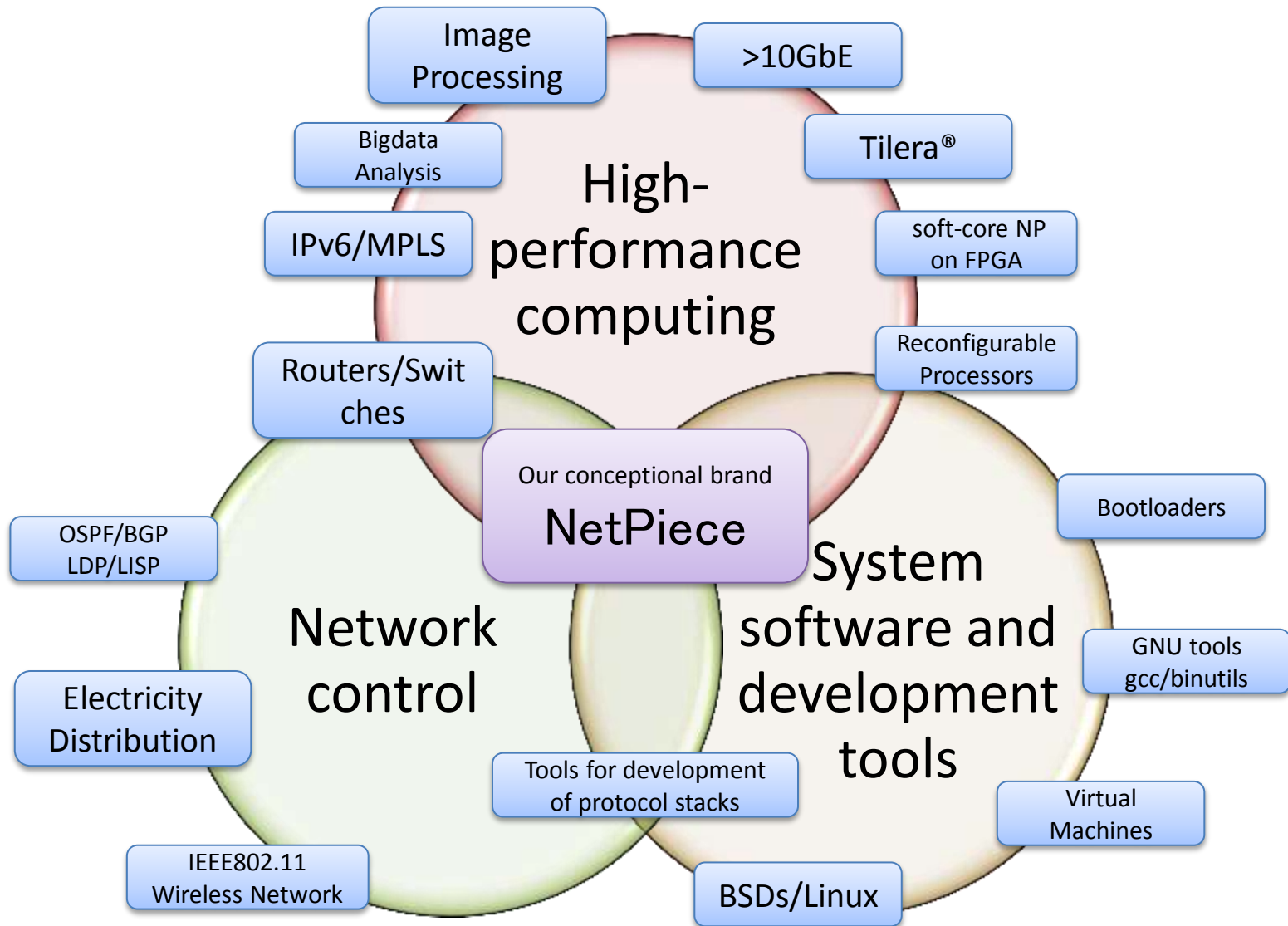
Principal Customers

- Laboratories
 - National Institute of Information and Communications Technology (NICT)
 - Nippon Telegraph and Telephone Corporation (NTT)
 - KDDI Corporation, KDDI R&D Laboratories
 - The Kansai Electric Power Co., Inc.
- Universities
 - Kyoto University
 - The University of Tokyo
 - Waseda University
- Developpers of Routers/Switches for the Internet
 - Furukawa Electric Co., Ltd.
 - IP Infusion (U.S.)
- Others
 - Fuji Xerox Co., Ltd.
 - OMRON SOFTWARE Co., Ltd.
 - TOKYO KEIKI INC.

TNT Business Cycle



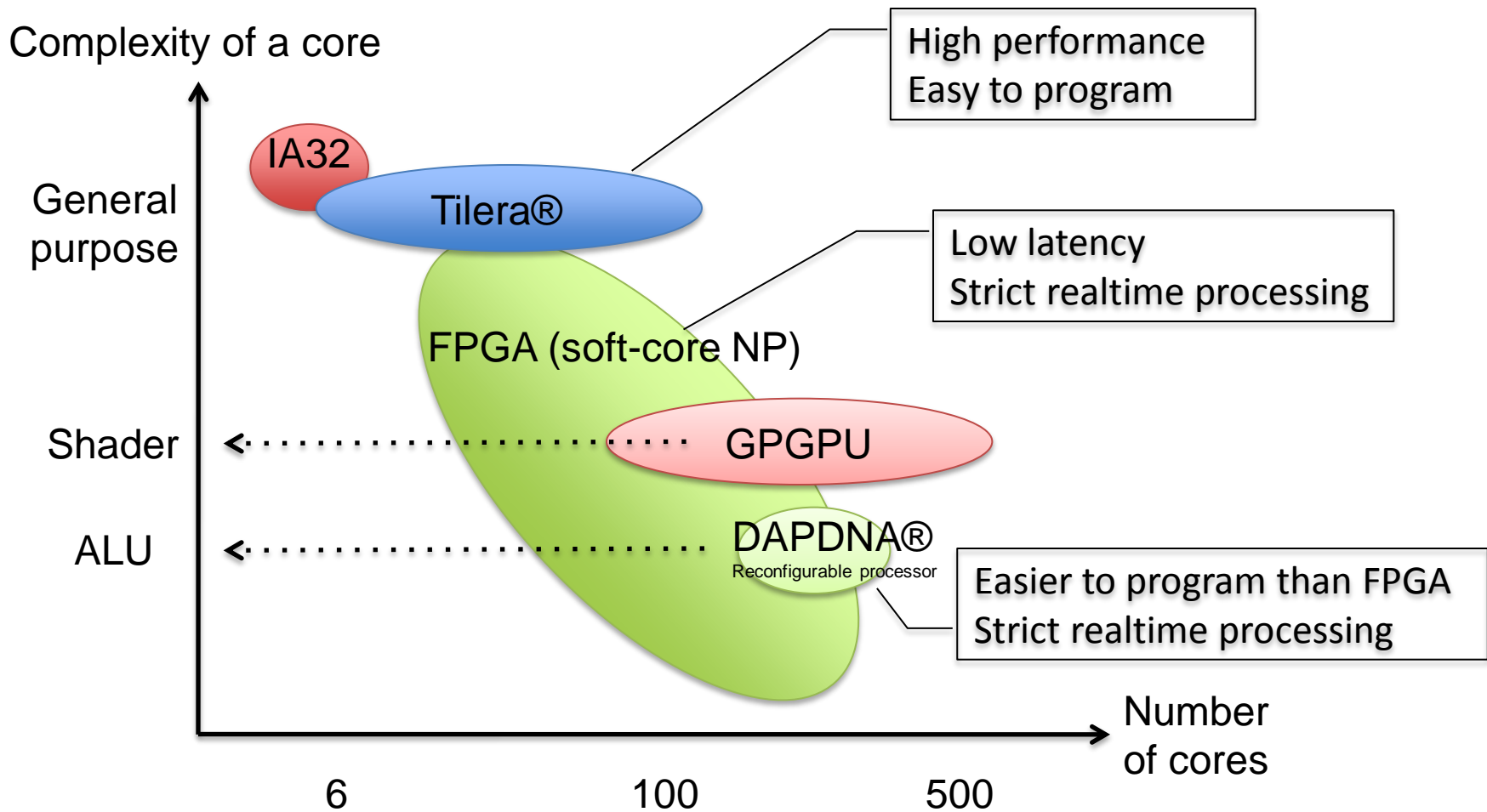
TNT Technology Focus



Products, Services and Solutions

- **FPGA NetPiece**
 - Very-low-latency (<10usec/packet) packet processing by FPGA
 - The evaluation kit for Altera® Stratix III is available.
 - **BSD/Nios II**
 - No-restricted POSIX (Linux-like) operating system for Nios II on FPGA
 - **DRUSKboot**
 - Flexible bootloader for FPGA SoC
- **Multicore NetPiece — Tiler® Massive Multicore solution**
 - Easy-programmable very-high-throuput (>10Gbps) processing
 - Linux operating system and standard multithread programming by C
- **Bigdata Analysis Service (Powered by TREASUREDATA)**
- **System Fixer Z**
 - challenge on computer systems to investigate and fix troubles which nobody found the reasons
- **System Planning/Development/Integration**

Manycore Processors TNT supports



Topics related to Tiler and TNT

- High-speed network processing
 - 40Gbps and 100Gbps are next targets.
 - 10Gbps can be processed by Intel Xeon in some cases.
 - Easy programming environment is important.
 - Students often implements new programs by themselves.
- Java VM
 - TNT is tuning up Java and Java-like VM in some projects.
 - Interpreter, JIT compiler, Heap management, Garbage collection
 - OpenJDK, Dalvik, other VMs for researchers...
- Single-function Appliance for web systems
 - memcached
 - Application server
 - Load balancer

Sample cases

- Low-latency routing and filtering by FPGA
- Monitoring packets over 10GbE by Tiler processor
- Continuous image processing by FPGA and DAPDNA

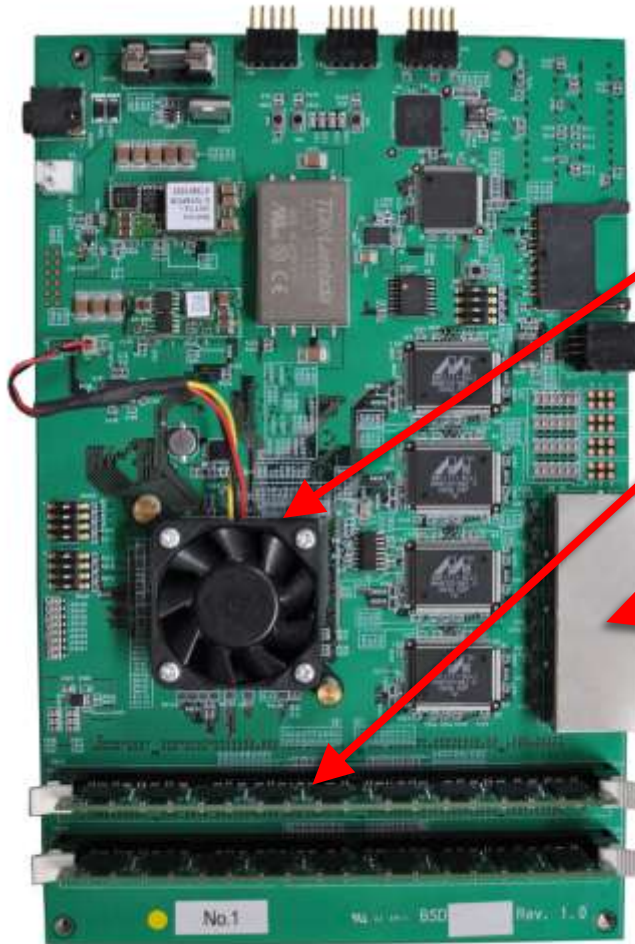
- Software and system for new routing protocol
- Google Android cell-phone system (not application)
- Routing protocol for electricity
- Image recognition for product inspection and Q.C.

Tilera Manycore processor system

- 64 cores on a chip
 - 100 cores for next generation in 2011
- two 10GbE interfaces
- 2.5GB or 5GB DDR2 memory
- Easy programming
 - Linux operating system
 - Standard multithread programming for multicore

- Please inquire for details

FPGA NetPiece — SoC Development Kit



- Principal devices
 - Stratix III EP3SL110F1152C4
 - (migration: EP3SL/E, 80,110,150,200,260,340)
 - Dual Channel DDR2 DIMM I/F
 - Max 4GB (2GB * 2)
 - 72bit data width * 200MHz * DDR * 2channels = .. 3.2GBytes/sec * 2channels
 - 4x Gigabit Ethernet I/F (PHY)
 - 4x Marvell 88E1111 PHY: 10/100/1000
 - connected to TSE via MII/GMII
- Flexible boot sequence
 - Our bootloader “DRUSKboot” enables the system to load FPGA configuration from SD card or via network.



Trans New Technology, Inc.

Thank you for your interest in TNT.