VISUALIZE THE FUTURE

DMP
DIGITAL MEDIA PROFESSIONALS

Fiscal Year Ended March 31, 2018

Results Briefing

Digital Media Professionals Inc.

May 21, 2018

1 **Explanation of Results, Fiscal Year Ended March 31, 2018**

2 **Fiscal Year Ending March 31, 2019, Business Forecast**

3 **Measures in the Time Ahead and Proposition for Future Growth**

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Operating Environment of the Company

Semiconductor Industry

- The semiconductor market in 2017 surged 21.7% from the year earlier to US$412.2 billion, surpassing US$400 billion for the first time ever owing to expanded application in servers and data mining despite facing headwinds from a slump in iPhoneX sales and falling flash memory prices (WSTS)

- Decreased demand resulting from reduced Chinese smartphone production, acceleration of Chinese semiconductor development and other factors arising from trade regulations aimed at Chinese companies due to worsening relations between the US and China could bring about seismic changes in industrial power relationships

- The model wherein set vendors and IT vendors engage directly in the development of semiconductors is accelerating as semiconductors come with increasingly high added value

AI / Visual Computing Field

- AI chip market forecast: 6-year CAGR from 2017 of 50%, with AI chip sales surpassing US$11 billion in 2023 (Allied Market Research 2018)

- Use of AI in graphics processing is accelerating. In particular, more than 60% of security camera and automotive products use AI (Embedded Vision Alliance Survey Dec. 2017)

Successful return to black figures due to significantly higher sales in all operations

- **LSI operations** (sales increased ¥149 million compared with the previous fiscal year)
  - Significant contribution from initiation of volume production of next-generation graphics processing LSI "RS1"

- **IP core licensing operations**
  (sales increased ¥72 million compared with the previous fiscal year)
  - Increased running royalties from existing customers in game machines and digital cameras, etc.
  - Licensing of the new GPU IP core "K3000" to new and existing customers

- **Professional services operations**
  (sales increased ¥57 million compared with the previous fiscal year)
  - Increased sales of AI-related software and commissioned projects from automotive equipment manufacturers
  - Additional new order receipts relating to commissions for the acceleration of NEDO "Development commissions for power-saving AI engines"

Results Summary (P/L)

(Unit: million yen)

	FY 03/2017	FY 03/2018	YoY change	
			(Amount)	(Increase-decrease rate)
Net sales	694	**973**	279	40.3%
Operating income	-263	**69**	333	—
Ordinary income	-262	**66**	328	—
Net income	-365	**109**	474	—

✓ Return to black figures for operating income due to increase in net sales and decrease in SG&A
✓ Impact on net income from recognition of extraordinary gain from cancellation of distributor agreement

Results Summary (B/S)

(Unit: million yen)

	End of March 2017	End of March 2018	Increase-decrease amount
Current assets	1,668	1,774	106
Non-current assets	112	346	233
Total assets	**1,780**	**2,121**	**340**
Current liabilities	91	228	137
Non-current liabilities	18	18	0
Total liabilities	110	247	137
Total net assets	**1,670**	**1,873**	**203**
Total liabilities and net assets	**1,780**	**2,121**	**340**

✓ Equity ratio of 88% remains at a high level

Initiation of Volume Production and Shipments of RS1
Next-generation Graphics Processor

*Decisions made for adoption at
several major leading customers

*Initiation of volume production and shipments
in fiscal year ended March 31, 2018

High added-value module with SoC and DDR memory in same package

Industry Trends and Forecast for RS1

- February 2018 revision of "Entertainment and Amusement Trade and the Implementation Rules for the Entertainment and Amusement Trades Rationalizing Act" took effect
- Fiscal year ending March 31, 2019 is off-season for transition to new standard machines, and market environment is expected to be harsh for industry as a whole
- Switch to new standard machines will progress in fiscal year ending March 31, 2020, and RS1 shipments will be in stride, so it is expected to be leading graphics chip in industry by mid-2020

Topics

Licensing start of "ZIA DV700" AI processor IP

▶ Processor with ultra-low power consumption specialized for Deep Learning inference process

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"ZIA Classifier" adopted for the drive recorder AI service provided by Sumitomo Mitsui Auto Service Company, Limited, the top auto leasing company in Japan

In the auto leasing industry the first application of AI technology to video analysis

Performs automatic drive-recorder video analysis to identify the specific driving behavior (causative behavior) that leads to dangerous driving, combined with an external camera video (behavior result) analysis and report

Categories of dangerous behavior

- Talking on and operating mobile phones/smartphones
- Looking away or driving with one hand
- Smoking
- Operating computers or other such devices
- Operating GPS/audio systems

Topics

Collaboration with Altima and Morpho on AI/Deep Learning technology using Intel® FPGA (November 2017)

ZIA DV series AI processor
- Advanced processor technology
- Hardware optimization technology

Neural network
- Model designing
- Model optimization technology

Provision of programmable solutions using Intel FPGA

Provision of FPGA platform with DV700

Accelerate introduction of edge AI

Development/evaluation made possible based on Morpho's object recognition DNN* learned model

Fast application to development/evaluation of inference environments and embedded devices in volume production

* Deep Neural Networks

Development of AI platform based on a power saving AI engine and a cloud integrating dissimilar engines

Amount awarded DMP under the contract (total amount)	¥475 million (existing portion) ¥108 million (additional portion in the current FY)
Duration of the commission	June 2016 - March 2019

Project outline

- Development of a power saving AI engine which enables AI algorithms to process 10 times more efficient than predecessors did

- Development of an AI platform for integrating dissimilar engines on the cloud side

Accelerate DMP AI Business

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Business Forecast

Expectations for 23% year-on-year growth in sales revenue due to focus on expanding sales volume of next-generation graphics processing semiconductor "RS1," for which volume production and shipping began in the previous fiscal year

Net sales (Unit: million yen)

FY 03/2015	FY 03/2016	FY 03/2017	FY 03/2018	FY 03/2019
464	733	694	973	1,200 (Forecast)
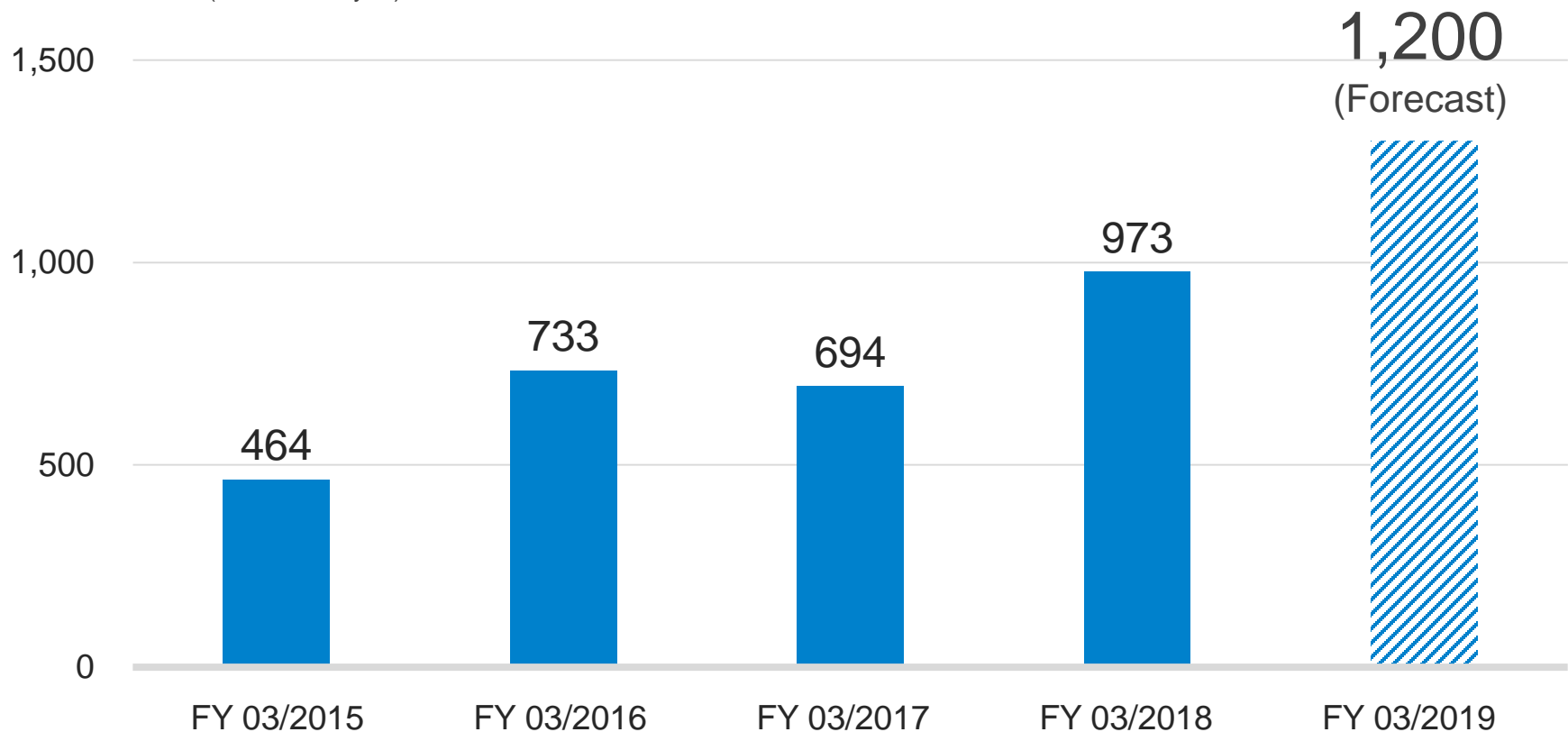
Net sales, operating income and ordinary income all to increase due to increased RS1 sales volume and expansion of AI products and services

(Unit: million yen)

	FY 03/2018 (Actual)	FY 03/2019 (Forecast)	YoY change	
			(Amount)	(Increase-decrease rate)
Net sales	973	**1,200**	227	23.2%
Operating income	69	**100**	31	43.3%
Ordinary income	66	**100**	34	50.6%
Net income	109	**90**	-19	-17.6%

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Measures in the time ahead

- **Full-scale launch of SoC business through launch of RS1 volume production**
  - Aim to develop industry standard platform by having it adopted by several major leading customers and focus on support for customer product launches

- **Expansion of ZIA platform product sales and portfolio**
  - Cultivation of new ZIA Classifier customers
  - Promotion of DV700/DV500 IP licensing and FPGA model business

- **Promotion of alliances**
  - Provision of AI solutions through collaboration with partner companies

- **Promotion of development commissions from NEDO for power-saving AI engines**

- **Promotion of AI-related professional services for automotive equipment manufacturers**

Promotion of strategic partnerships

In regard to our work with business and capital alliance partner UKC Holdings, we will collaborate as a channel partner in LSI operations and, in the future, jointly develop solutions for AI.

UKC
株式会社 UKCホールディングス

Trends in Artificial Intelligence

As learning processes handling big data are processed on the cloud, it will become mainstream for inference processes to utilize <u>edge AI</u>

- ✓ Superior in terms of real-time properties
- ✓ Protection of privacy
- ✓ Reduction of network bandwidth and power
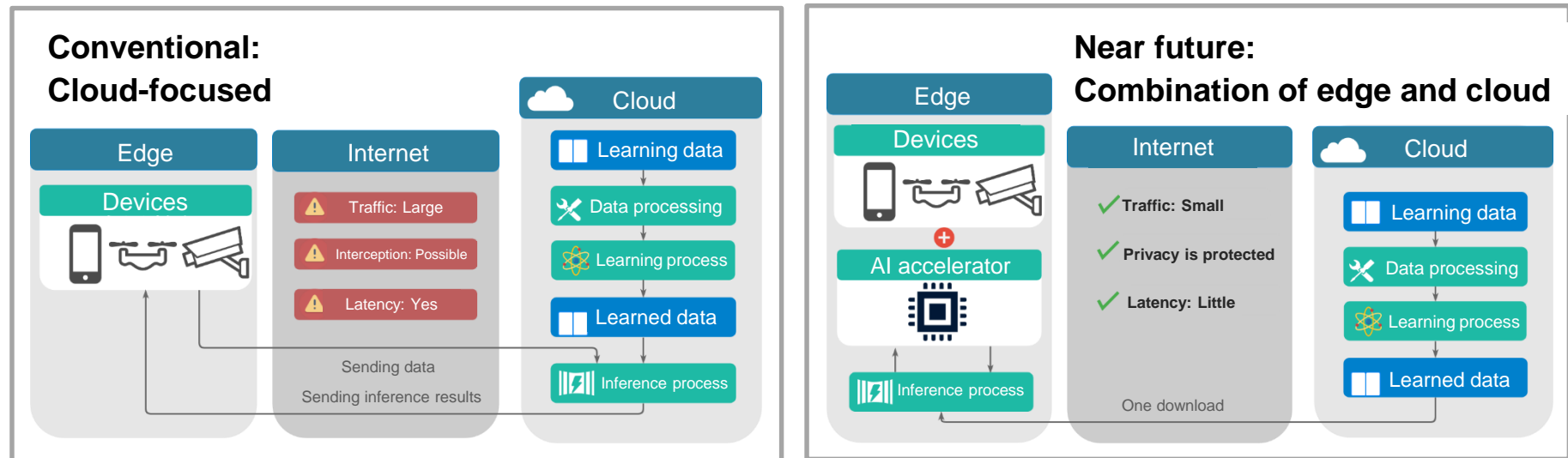
75% of inference processes handled on edge or combination of edge and cloud (Embedded Vision Alliance Survey Dec. 2017)

Trends in Artificial Intelligence

Use of __FPGA__ (rewritable logic circuit LSI) as AI accelerator is increasing

✓ Higher power performance than general-purpose GPU

✓ Superior to ASIC in terms of rewritability and flexibility, making low cost development possible

✓ Follows latest AI algorithms, making quick commercialization possible

✓ Supports long-term parts supply

	CPU	GPU	FPGA	ASIC
Real time properties	×	○	○	◎
Low power consumption	×	×	○	◎
Flexibility	○	○	○	×
Long-term supply	△	×	◎	○

40% of customers use FPGA as graphics processor/AI semiconductor

(Embedded Vision Alliance Survey Mar. 2018)

FPGA

DMP AI processor

Products equipped with edge AI can be developed quickly

Deep Learning / AI / ZIA™

ZIA™ Z Intelligence Accelerator

- Based on the technologies accumulated since the founding as Japan's only GPU vendor, the AI platforms of DMP form novel software/hardware products fusing AI/Deep Learning knowledge.

Deep Learning AI

ZIA™ Platform
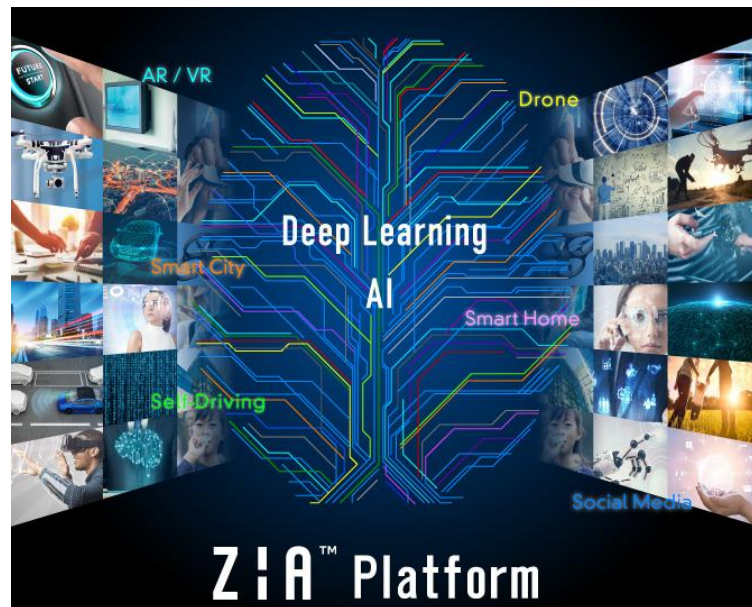
Software Product

ZIA™ Classifier | On sale | **Image classification engine (November 2016)**

Hardware Product

ZIA™ DV700 | On sale | **The first AI processor for edge computing (April 2017)**

ZIA™ DV500 | NEW | New sales launch | **The second AI processor for edge computing (April 2018)**

ZIA™ AI LSI | Under development

ZIA DV700 Edge AI Processor IP

Processor IP core with ultra-low power consumption specialized for Deep Learning inference processing applicable to all data categories

ZIA™ DV700

- The second product of the "ZIA" product platform using AI technology of DMP

- Processor IP with ultra-low power consumption suited for edge-computing AI processing, capable of inference processing applicable to all data categories including images, videos, and voice data, etc.

- Combines low power consumption and high performance with flexible response capability regarding functions and performances required for a diversity of applications including security cameras

ZIA™ DV700

Size	Performance (FPS)	Power (W)
Small size 2.3 mm² TSMC28HPC+ (Operating frequency 750 MHz)	**High performance** GooLeNet processing: 116 FPS	**Power conservation** GooLeNet processing: 670 mW
DMP ZIA™ DV700, DSP A, DSP B, DSP C	DMP ZIA™ DV700, GPU of Company A, DSP of Company B, DSP of Company C, DSP of Company D	DMP ZIA™ DV700, GPU of Company A, DSP of Company B, DSP of Company C, DSP of Company D

Edge AI processor supporting low-cost FPGA

Accelerate edge AI implementation in industrial and automotive

NEW

Optimized for scene understanding and object recognition (SSD/SegNET) often used in industrial equipment and automated driving systems


Can be used with low-end FPGA such as Intel Cyclone V and Xilinx Zynq7000 (Note: Photograph is of Cyclone® V SX SoC development board)

◆ **Example of object detection by ZIA™ DV500 (SSD Multibox detection)**
   Detects car, motorcycle and human on bicycle

Collaboration with ACCESS, a one-stop provider of IoT solutions, on converting IoT and edge computing technology for use with AI (April 2018)
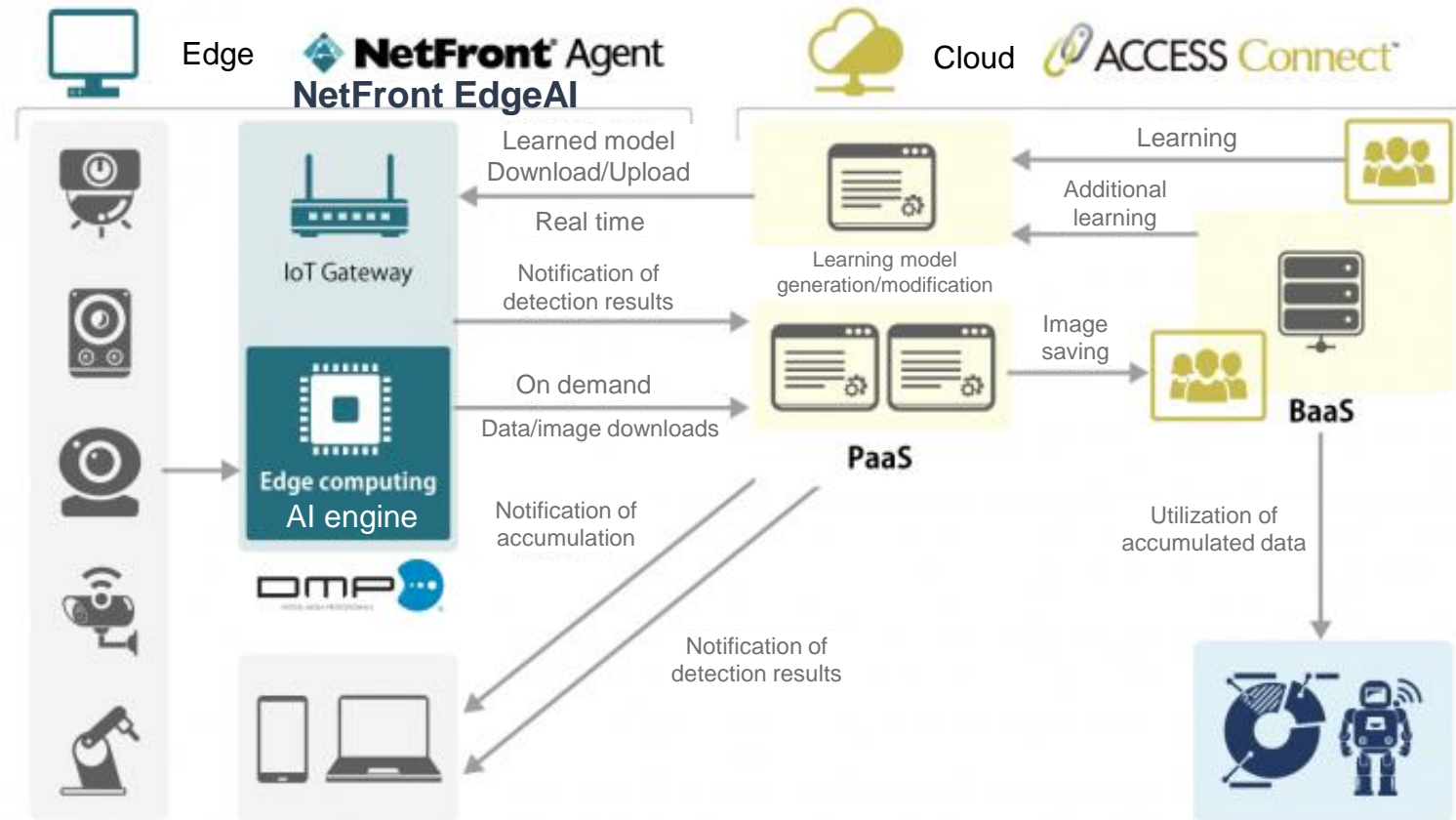
Edge-learned model updates, life/death monitoring and firmware updates can be performed remotely

DMP - Automated Driving Technology

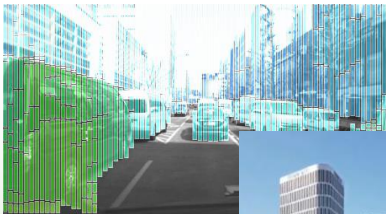**Development of automated driving algorithms, CPU/GPU implementation and development of hardware accelerator**
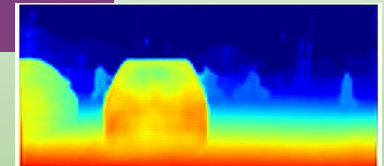
(3) Judgment
Prediction, path planning, obstacle avoidance

AI
X
Automated driving
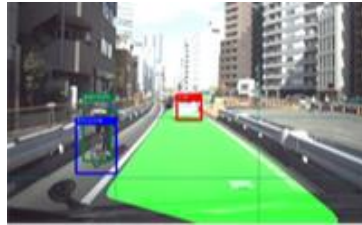
(1) Environment sensing
Camera, GPS, LiDAR
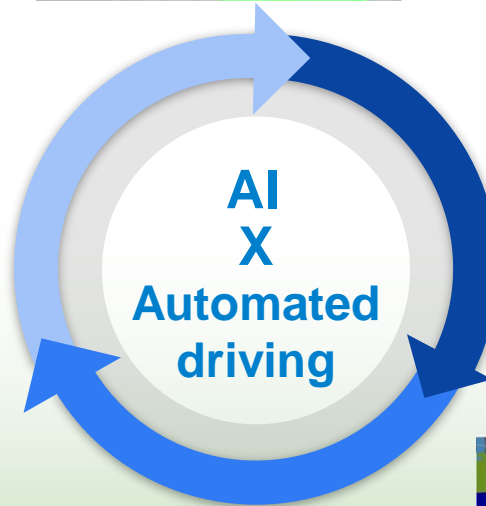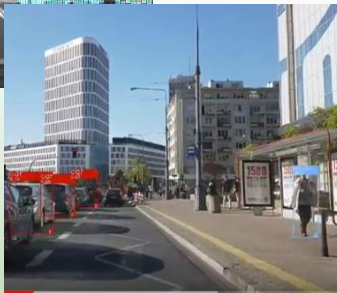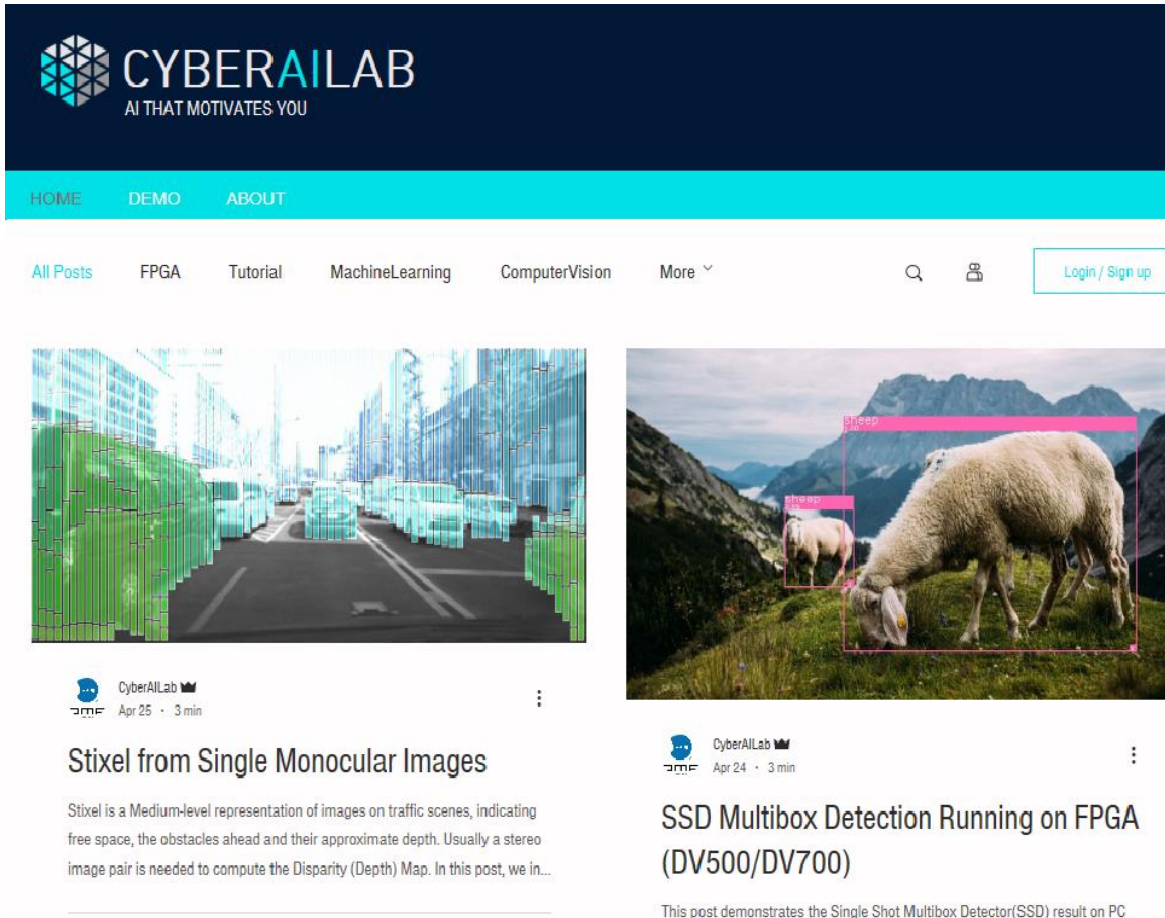
(2) Recognition
Self-localization, object detection, recognition and tracking, object segmentation

New Establishment of Cyber AI Division (March 2018)

Engineers from various countries specializing in AI, GPU and computer science are working on R&D utilizing AI and development of innovative products and services at DMP.

The DMP Cyber AI Division website will introduce DMP's AI initiatives.

https://www.cyberailab.com/
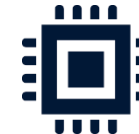
- Computer Vision
- FPGA
- Machine Learning
- Self-driving Car

Proposition for Future Growth

Establishment of new growth domains

Expansion into the growing IoT/AI field
Integrated development of AI algorithms, software and hardware

Development of ZIA platform

- AI processors for edge computing
- Software
- Modules
- Provision of solutions with partners
- Overseas development

Expansion of professional services centered on automotive industry

- Automated driving algorithms

Expansion of the SoC / Module Business

- Top share in amusement SoC
- High-volume AI products

Establishment of a SoC business platform in the amusement market where we can win

- **Volume production of new product "RS1"**
- **Aim to make it an industry standard platform**

Current position

| Phase 1 | Phase 2 | Phase 3 |

Thank you for listening.

<Inquiries>

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Forward-looking statements contained within this document are based on currently available information and involve risks and uncertainties, including macroeconomic conditions and trends in the industries in which we are engaged. As such, actual results may differ materially from those anticipated.