The Competition Policy Research Center of the Japan Fair Trade Commission
6th Osaka Symposium

[Temporary Translation]

Overview and Outlook of Competitive Environment Surrounding Generative AI

- With a Focus on the Nature of Generative AI and the Presentation of Attitudes toward Generative AI by Companies and the Competition Authorities

Friday, March 15, 2024

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Key Natures of Business Activities relevant to Generative AI (1)

Business activities relevant to Generative AI

Foundation model as unique assets and services

- The foundation model has, in some aspects, different features from common assets and services.
- Typical features include: demands for huge input resources (high quality data, outstanding human resources, huge computing power, enormous capital, etc.), extremely active innovation, and the need to make controls and regulations based on social and public objectives, which can affect competition analysis.
- Since the natural language processing is the underlying technology of foundation models, we may need to consider the possibility that the performance may differ among languages with different syntax (it may affect the arguments regarding market definitions especially for minor languages).

Importance of development and the human resources to support it

- Since the competitive environment for foundation models can vary greatly depending on their performance, continuous innovation is essential to maintain the leading position in the market for the supply of foundation models.
- Securing outstanding AI engineers who bring innovation will be at the core of the competition (acquiring outstanding AI engineers has its own significance, different from having a large number of standard-level AI engineers)
- Competition for talent (human resource) is the main driver of transactions relevant to the supply of the foundation model.

Key Natures of Business Activities relevant to Generative AI (2)

Business activities relevant to Generative AI

Intense volatility of the competitive environment

- There seems still no de facto standard in the market for the foundation model, and innovation in the R&D can radically change the competitive landscape.
- Even once a competitive environment is established, the competitive landscape can easily change due to the nature of the foundation model, which can change dramatically in performance with innovation..
- The competition of the layer of the foundation models has a particularly volatile and dynamic competition environment.

Need for establishing rules and regulations by social public purpose

- The explosive development of the foundation models of generative AI points raise issues on unexpected developments and inappropriate utilization (e.g., infringement of human fundamental rights through utilization).
- From the perspective of responding to such social and public demands, uniform restrictions on specification and R&D over foundation models and each use case applications may be required, but since such restrictions may function as obstacles to R&D and innovation, it may be necessary to make judgments based on the legitimacy of the purpose and reasonableness and appropriateness of the means.

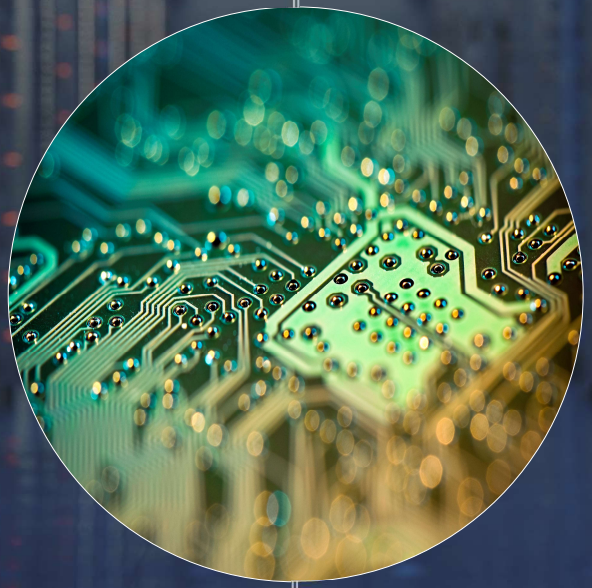
2. UNDERSTANDING THE SUBJECT OF CONSIDERATION : GENERATIVE AI AND BUSINESS ACTIVITIES SURROUNDING IT

- What is Generative AI?
- Basics related to Generative AI
- Several key events relevant to Generative AI
- Attitudes toward Generative AI by the Japan Fair Trade Commission and other ministries
- Attitudes toward Generative AI by foreign competition authorities (1) and (2)
- Attitudes toward Generative AI by major big techs
- Attitudes toward Generative AI by Japanese companies

What is Generative AI?

Definition of Generative AI

- No quite established definition, but generally consistent in what it refers to in various contexts
- An example of an explanation is as follows
  - A category of AI that empowers machines to generate new content rather than simply analyze or manipulate existing data rather than simply analyze or manipulate existing data") (Source: US FTC).



- Reached a practical level caused by dramatic improvements in natural language processing capabilities
  - The adoption of the transformer model (a method of sequential data processing that uses a self-attention mechanism to capture the relationships among elements in a sequence) in the field of natural language processing has led to improved recognition of text and more efficient generation of new content.
  - Increased computing power and model improvements have resulted in the recent generation of a series of foundation models with a vast array of parameters.

Background of the growing interest in Generative AI

Basics related to Generative AI

Some of the major terms and concepts with concise explanations in understanding Generative AI and Competition

Basic concept	Overview
Natural language processing	It is a technology that uses computers to process words written and spoken by humans and is one of the core elemental technologies in the field of artificial intelligence (AI) research. It learns patterns of connections between words based on a vast amount of sentences for training and makes predictions. Parameters are the values used to adjust word predictions based on the patterns of connections between words so that they can be made appropriately.
Foundation Model	A model of learning (pre-learning) based on the vast amount of data that serves as a base. Generation requires specialized chips to speed up the operations required for machine learning and cloud services or supercomputers with them. Foundation models include large-scale language models (Large Language Model) that deal with natural languages and diffusion models that produce images. Currently, major infrastructure models are being developed and provided primarily by U.S. companies.
Parameters	A value used to control the behavior of a model. It is one of the main specifications of the foundation model and reaches the level of hundreds of billions in large-scale language models (LLMs).

Principal forms of development/provision of Generative AI

Development and provide form	Overview
Open source type	The source code is published and provided as open source software which can be improved, modified, reproduced and distributing by Licensee under a free license Meta's LlaMa, LlaMa2 is a typical example of an open-source platform
Proprietary type (closed source type)	The source code is not disclosed and is provided by API as proprietary software (closed source software) subject to restrictions on improvements, modifications, etc. by the Licensee. As exemplified by GPT developed by Microsoft's OpenAI and Gemini provided by Google as proprietary platform models

Source: Prepared by the speaker based on AIST magazine "What is natural language processing?" and "Simon Margolis "Generative AI pricing: 3 major considerations + AI glossary" based on the materials provided by the secretariat of the Competition Policy Research Center

Several Key Events relevant to Generative AI

Source: Prepared by the speaker based on George Lawton "Generative AI's evolution with addition and removal amendments.

Attitudes toward Generative AI by the Fair Trade Commission and Government Offices

Movements of the Fair Trade Commission

Efforts Related to Issues in Competition Policies Relating to Generative AI

- On November 8, 2023, G7 Enforcements and Policy Makers Summit (G7 Competition Authorities and Policymakers' Summit) was held in Tokyo. Digital Competition Communique was adopted at the summit, with the participation of G7 competition authorities and policy-makers, including an indication of competition issues that could be triggered by the generating AI and the attitude of the competition authorities to address these issues (Section 7-13).
- At the 22nd International Symposium hosted by the Centre for Competition Policy Research on the occasion of the summit, Issues related to generative AI in Anti-monopoly Act and competition policy prepared by the Secretariat of the Centre for Competition Policy on Antimonopoly Law and Competition Policy Issues on Generative AI was announced, and issues concerning the Antimonopoly Act and competition policy envisaged in terms of developing, providing, and utilizing generative AI were pointed out.

Examples of Major Trends in Other Government Offices

Topics	Overview
Hiroshima AI Processing	Following the outcome of G7 Hiroshima Summit in May 2023, AI was launched and processed in order to consider international rules-related issues. Subsequently, based on the October 30, 2023, Leaders' Statement and the December 1, Ministerial Meeting on Digital and Technologies, the first international framework aimed at addressing sophisticated AI such as generative AI was established.
Intellectual Property and AI	Since July 2023, AI and copyright issues have been summarized, and in January 2024, the Agency for Cultural Affairs began publicizing the draft "AI and Copyright Concepts." Since October 2023, the Intellectual Property Policy Promotion Secretariat of the Cabinet Office has held the Intellectual Property Rights Study Group for AI Age to address issues related to the relationship between AI and intellectual property rights.
AI Strategy Meeting, etc.	Since May 2023, AI Strategic Council, organized by experts, has been held, and AI Strategic Team has been organized at the working level of relevant ministries and agencies, including JFTC, based on the discussions at the meeting.
For business Guidelines	Based on discussions in the Hiroshima AI Processing, the Ministry of Internal Affairs and Communications and the Ministry of Economy, Trade and Industry have taken the lead in updating the Governance/Guidelines for the Implementation of AI Principles (METI), AI Development Guidelines (MIC), and the Guidelines for the Utilization of AI (MIC).

Source: Prepared by the speaker based on materials provided by the secretariat of the Competition Policy Research Center

Attitudes toward Generative AI by Foreign Competition Authorities (1)

Examples of the most recent major moves of the respective competition authorities related to topics including the generative AI

Country, region, etc.	Overview
United States	• In FTC Staff Technologies Log, expressed concern that the generative AI would cause competitive concerns (June 2023) • Presidential Decree on the Development and Use of Safety, Safe and Reliable AI issued and described the promotion of competition in the marketplace regarding AI and related technologies. (November 2023) • In FTC Staff Technologies Log, announced that AI companies must comply with their privacy and confidentiality obligations. (January 2024)
EU	• Adoption of AI Regulation Draft (AI Act), which is a draft regulation of AI by a comprehensive hard law, including the generative AI (June 2023) • Comments on competition in a virtual-world and generating AI were solicited. (January 2024) • Survey on whether investment in OpenAI by Microsoft is subject to review under EU Business Combination Regulation (January 2024)
United Kingdom	• Published an initial report on the basic model of the generating AI and presented seven principles for developing the basic model (September 2023) • Analyze trends in digital markets, including topics related to generation AI (Horizon Canning Report) published (December 2023) • Comments on the impact of Microsoft and OpenAI alliance on domestic competition in the UK (December 2023)

Source: Prepared by the speaker based on materials provided by the secretariat of the Competition Policy Research Center

Attitudes toward Generative AI by Foreign Competition Authorities (2)

Examples of the most recent major moves of the respective competition authorities related to topics including the generative AI

Country, region, etc.	Overview
France	• Launch of Opinions on Competition in the Cloud Area, which touched on the importance of innovation in generative AI techniques (June 2023) • Conducted on-site inspections based on suspicions of having committed anti-competitive activities against NVIDIA, a major GPU manufacturer (September 2023)
Germany	• Considering whether Microsoft's planning of investing in OpenAI is subject to the Business Combination Regulation, it is judged to be excluded (November 2023)
Australia	• Publication of a working paper on the harms and risks of algorithms (November 2023) • Publication of a working paper on the role of large-scale language models and regulators (November 2023)
Portugal	• Publication of the Issue Paper on the Competition and Generative AI (November 2023)
Hungary	• Commencement of market-based analyses of the impact of AI (January 2024)

Source: Prepared by the speaker based on materials provided by the secretariat of the Competition Policy Research Center

Attitudes toward Generative AI by Major Big Techs

Major Developments in Developing and Providing Generative AI by U.S. Big Techs

Company	Overview	AI tip	In-house Foundation Model	Foundation model Cloud	Installation of generated AI Application
Microsoft OpenAI	Ownership of exclusive licensing for GPT-4, etc. through investment in OpenAI OpenAI Foundation Models available on Cloud Services Azure Develops AI for generating Microsoft Copilot and incorporate them into Word and Excel, and incorporate Generative AI into search-engine Bing	Under development	○	○	○
Alphabet (Google)	Provides through Google Cloud with LaMDA, PaLM2, Gemini as a basic model for in-house development Provides Duet AI that extend the functions of Google Docs and other applications, as well as Search Generative Experience for the creation and AI of search engines.	○	○	○	○
Amazon	Provides environmental Amazon Bedrock using the generative AI base through on-demand IT resource provision environmental AWS(Amazon Web Service) Provides Amazon Titan, a basic model manufactured in-house, as well as the use of the basic model of each company.	○	○	○	
Meta (Facebook)	Has Llama2, a platform for in-house development, and is open source software. Provides AI Sandbox of the generative AI as part of the incorporation of Facebook and Instagram into our own services.	○	○		

Source: Prepared by the speaker based on materials provided by the secretariat of the Competition Policy Research Center

Attitudes toward Generative AI by Japanese Companies

Overview of Japanese Business Activities Related to Generative AI

Overview of Use and Development of Generative AI by Domestic Companies

- Domestically as well, the use of Generative AI in the business activities of companies is progressing, and in particular the use of Chat GPT is widespread
- On the other hand, the Generative AI use by domestic enterprises are mostly based on the basic model developed by Big Techs, and the development of the basic model by domestic enterprises and the utilization of the basic model are still developing
- Nevertheless, in recent years, domestic companies have been accelerating the development of Japanese-language foundation models (LLM) and have been recognized as having performance comparable to Big Techs.

Major Trends in Japanese-Language LLM Developments by Japanese Companies

Company name	Overview
NTT	The Japanese-language LLM"Tsuzumi was developed in October 2023 and will be used commercially in the most recent year. Compared to BigTechs developed LLM, Tsuzumi is considered to have a lightweight and advanced Japanese-language performance.
Cyberagent	CALM (Cyber Agent LM) 2 was released in November 2023 and is now offering on commercially available terms Improvement of AI development-environment such as mass introduction of H100, a GPU made of NVIDIA
NEC	It announced in July 2023 that it had developed an independently developed LLM"cotomi, and through the subsequent enhancement of its performance, it is said that it has a top-class Japanese-language dialogue capability both at home and abroad.
SOFTBANK SB Institution	Started operation of development platform for generative AI development in October 2023. Currently under development in SB Institution with the aim of building a domestic LLM with 350 billion parameters by the end of 2024, based on the largest development platform in the country
Other	Fujitsu, Sakura Internet, ELYZA, Stability AI Japan, rinna, LINE, etc. are developing Japanese-language LLM.

Source: Prepared by the speaker based on materials provided by the secretariat of the Competition Policy Research Center

3-1. UNDERSTANDING THE CONSIDERATION PERSPECTIVE : LAYER STRUCTURE OF GENERATIVE AI

- The Major Layers Consisting of Generative AI
- Multi-Layers of Generative AI (1) Infrastructure Layer
- Multi-Layers of Generative AI (2) Development Layer
- Multi-Layers of Generative AI (3) Implementation Layer

The Major Layers Consisting of Generative AI

- Business activities around Generative AI are composed of multiple layers

Utilization layer
(User)

Implementation layer
(Applications, Services, etc.)

Development layer
(Foundation Model)

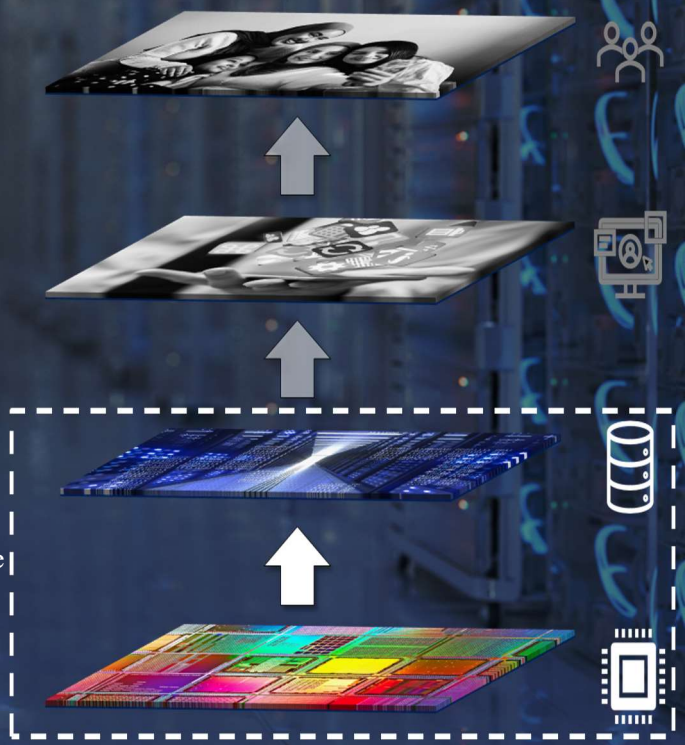
Infrastructure layer
(Processing Unit, Data, etc.)

Multi-Layers of Generative AI (1) Infrastructure Layer

Competition in the infrastructure layer supporting Generative AI

Nature of competition in this layer

- Competition over the supply of computing equipment used in the development of foundation models of Generative AI.
- The most distinctive infrastructures include processing unit used in the development of foundation models.
- Due to the requirement of the parallel processing, high-performance image processing unit (GPU; Graphic Processing Unit) is desirable for the development of the foundation model of Generative AI.
- Among the GPUs currently required for the development of the foundation model, demand for GPUs manufactured by NVIDIA is said to be particularly high, making them an essential input for the development of the foundation models.
- NVIDIA itself is developing services to support the provision of the foundation model for Generative AI and appears to move toward vertical integration.
- The competitive landscape in the semiconductor market has shifted due to the growing activity relevant to the Generative AI, which accelerate NVIDIA's quasi-dominant position.
- It remains to be seen whether NVIDIA will face competition from other operators or whether it will remain quasi monopoly or oligopoly.

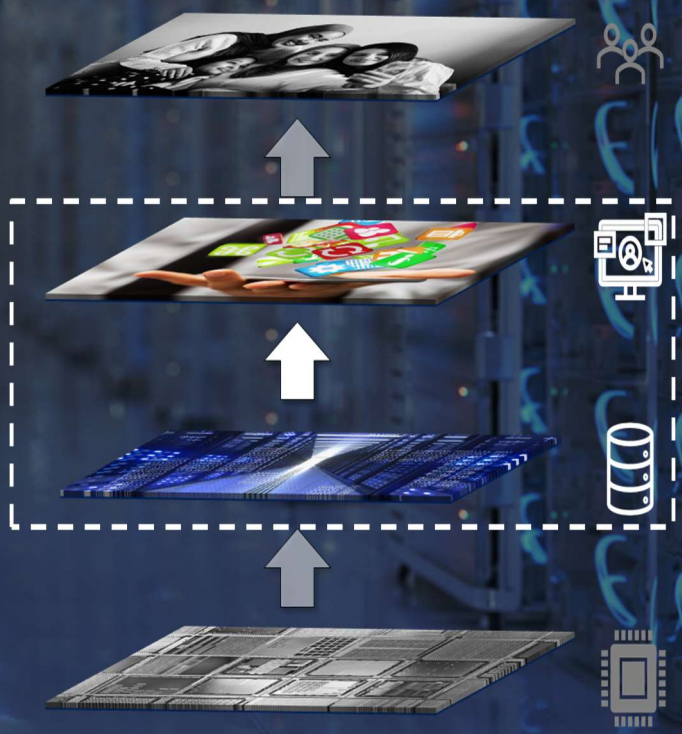


Multi-Layers of Generative AI (2) Development Layer

Competition in the Development layer of Generative AI (Foundation Model)

Nature of competition in this layer

- Competition over the development and supply of the Foundation Model
- Development of the Foundation Model requires enormous resources and is prone to oligopoly by a limited number of companies.
  - GPT by Microsoft/Open AI, Inc.
  - BERT by Google, Inc.
  - Llama by Meta, Inc.
  - Titan by Amazon
- Major operators are basically limited to the giant platform operators, but dynamic R&D competition exists
- Vertical integration, such as business activities at the specific application layer by foundation model providers, is also seen
- Monetization strategies will be important for the development and provision of the Foundation Models, and it may be necessary to keep in mind the possibility that a subscription monetizing model may be adopted in “B to B” transactions even if the “B to C” service is offered for free of charge, or that a lock-in may occur due to so-called “freeminium” model

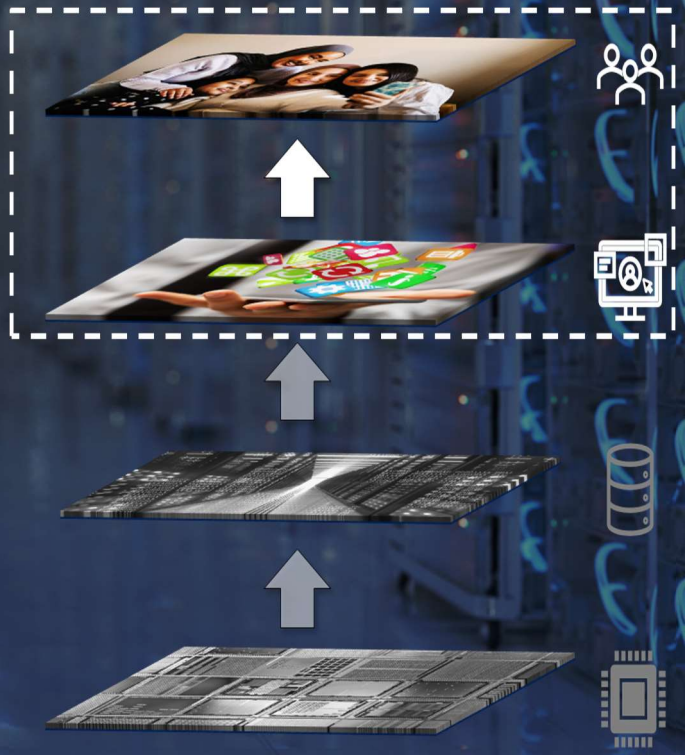


Multi-Layers of Generative AI (3) Implementation Layer

Competition in the Implementation Layer of Generative AI (Foundation Model)

Nature of competition in this layer

- Implementing Generative AI based on foundation models, specifically competition over the development of use-case apps (applications and tools to be used by the end-user) tailored to individual use cases using the foundation model
  - High-quality customer service
  - Various image generation services
  - Training programs customized for your company
  - High-performance translation services
- The availability of foundation model lowers the barriers to enter the use-case apps business
  - Providing the foundation model stimulates innovation in some aspects.
  - Supply of the foundation models is a key factor to ensure the free and fair competitive environment in the application/tools layer
- In the case of vertical integration by major companies in the development layer and business expansion in the implementation layer, adverse effects on competition are likely to occur.
- Major players in the development model layer are likely to vertically integrate and develop their business in the implementation layer as well, which will be detrimental to competition.
- In the case of competition over the provision of content generated by applications and services at the implementation layer, issues may arise as to whether human-generated content and AI-generated content are categorized as a goods/services in the same market.

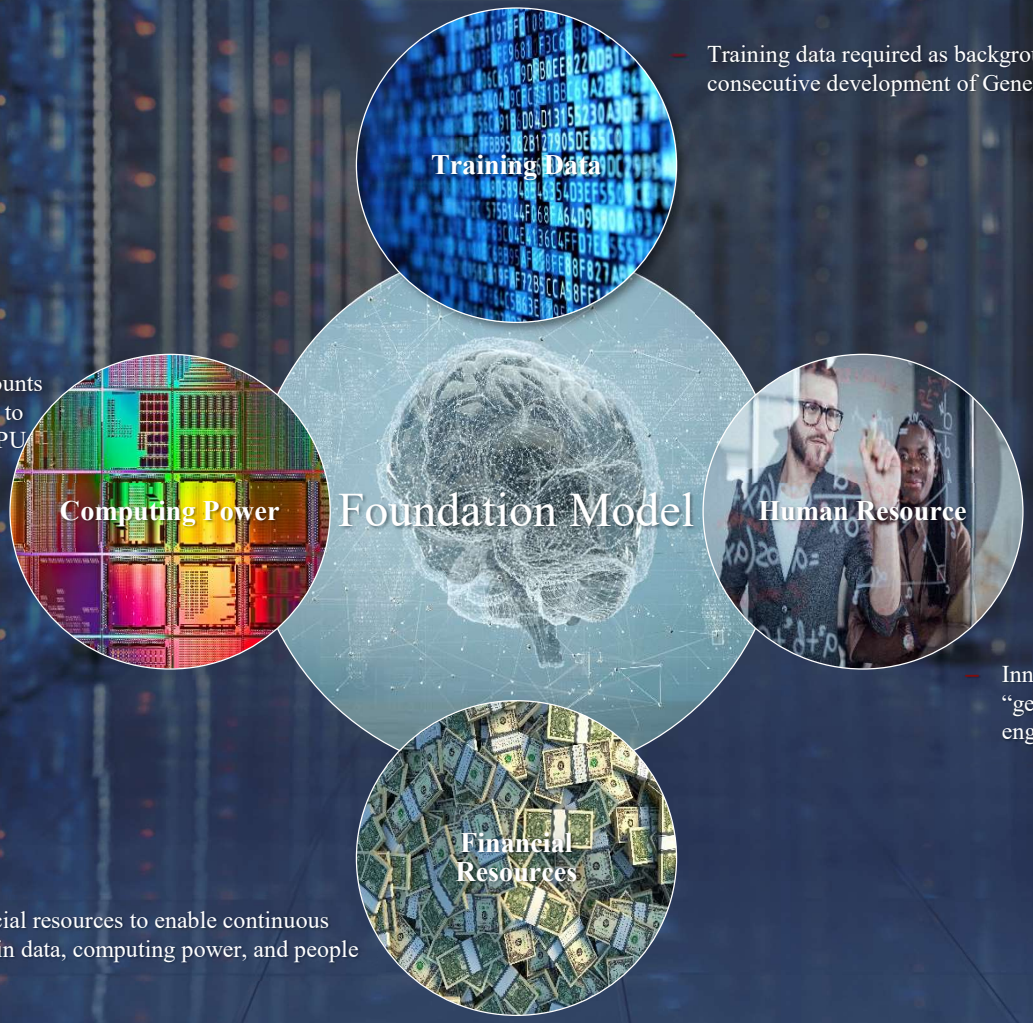


3-2. UNDERSTANDING THE PERSPECTIVE OF STUDY : COMPETITION IN DEVELOPMENT OF FOUNDATION MODELS

- Natures of the Competition Environment for the Foundation Model Development Layer
- Major Inputs (1) Training Data
- Major Inputs (2) Human Resources
- Major Inputs (3) Computing Power
- Major Inputs (4) Financial Resources

Natures of the Competition Environment for the Foundation Model Development Layer

Key factors influencing the competitive environment for developments of the foundation model

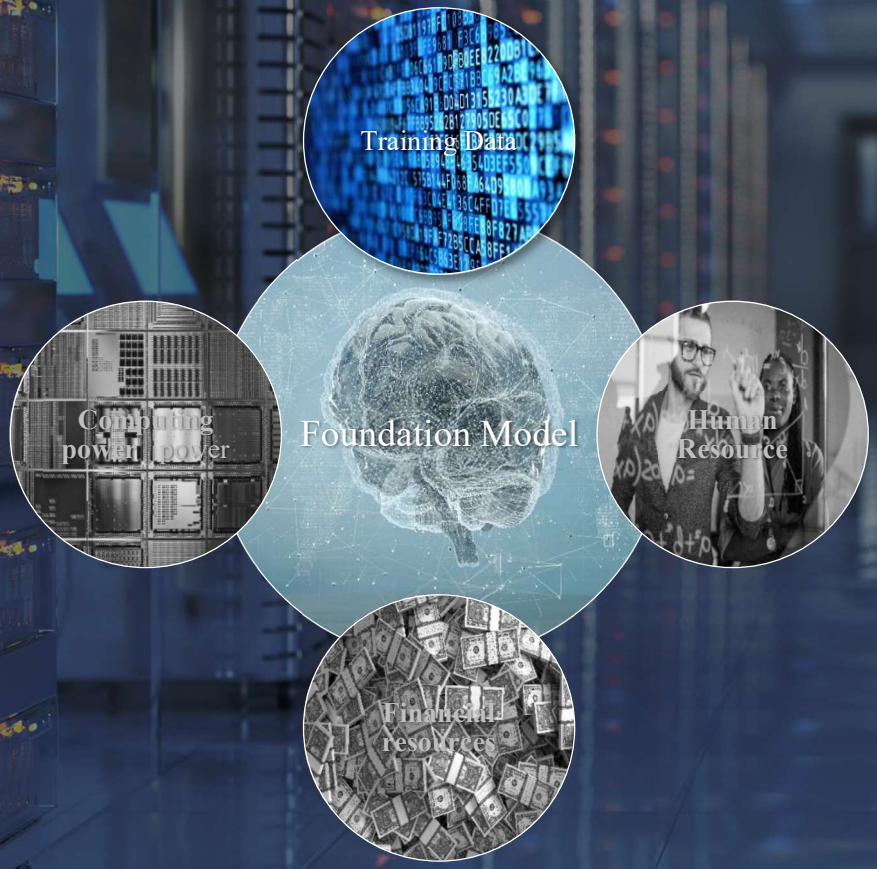


- Training data required as background for the consecutive development of Generative AI.
- Computing power to process huge amounts of data (especially requiring the ability to perform parallel processing, such as GPU)
- Innovation of the algorithm itself by hiring "genius" (i.e., really smart intelligent engineers)
- Huge financial resources to enable continuous investment in data, computing power, and people

Source: Prepared by speaker

Major Inputs (1) Training Data

- Foundation model and training data

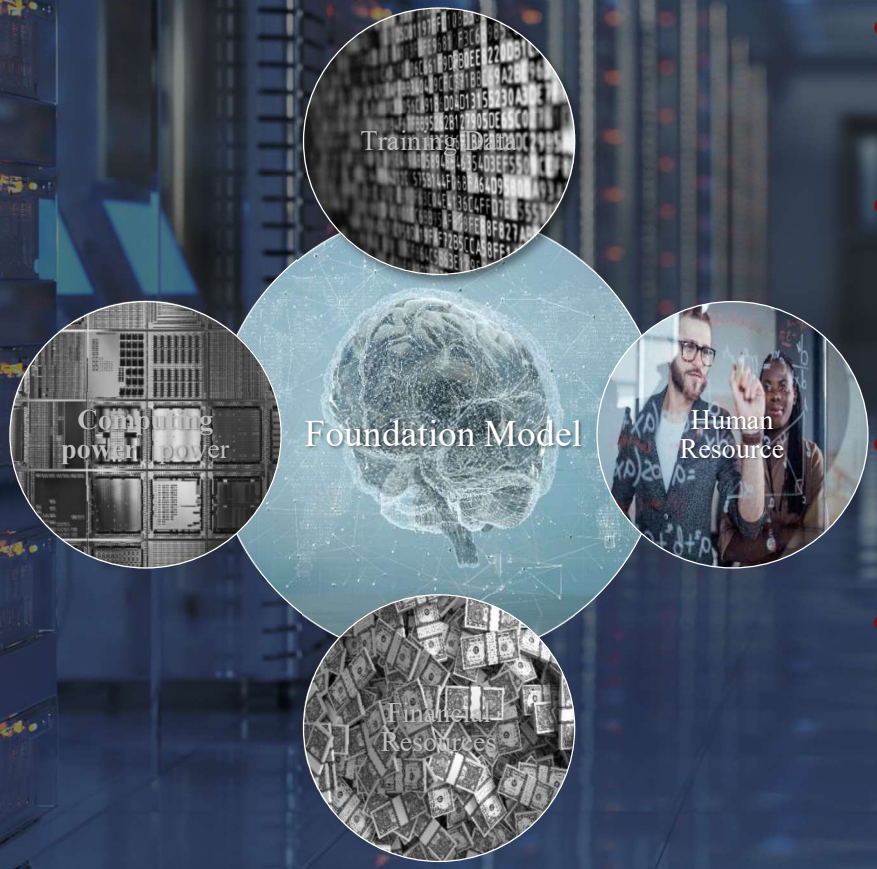


Training data

- To build a practical level of Generative AI, it is essential to process extraordinarily large amounts of good quality data for training (Teaching data is an important input in the competition for the foundation model).
- Training data tends to be accumulated in Big Tech, which already has a huge number of users and storage capacity.
- It is not easy to acquire new, high-quality, proprietary training data, and this may be a barrier to entry for new entrants (however, the quality and quantity of the underlying training data does not immediately lead to competitive advantage, and technological innovation through superior design concepts, etc. is also important).
- Competition issues surrounding the acquisition and use of data are already being considered by competition authorities in each country, and there are also specific issues such as the protection of personal information and copyright issues.

Major Inputs (2) Human Resources

- Foundational model and human resources

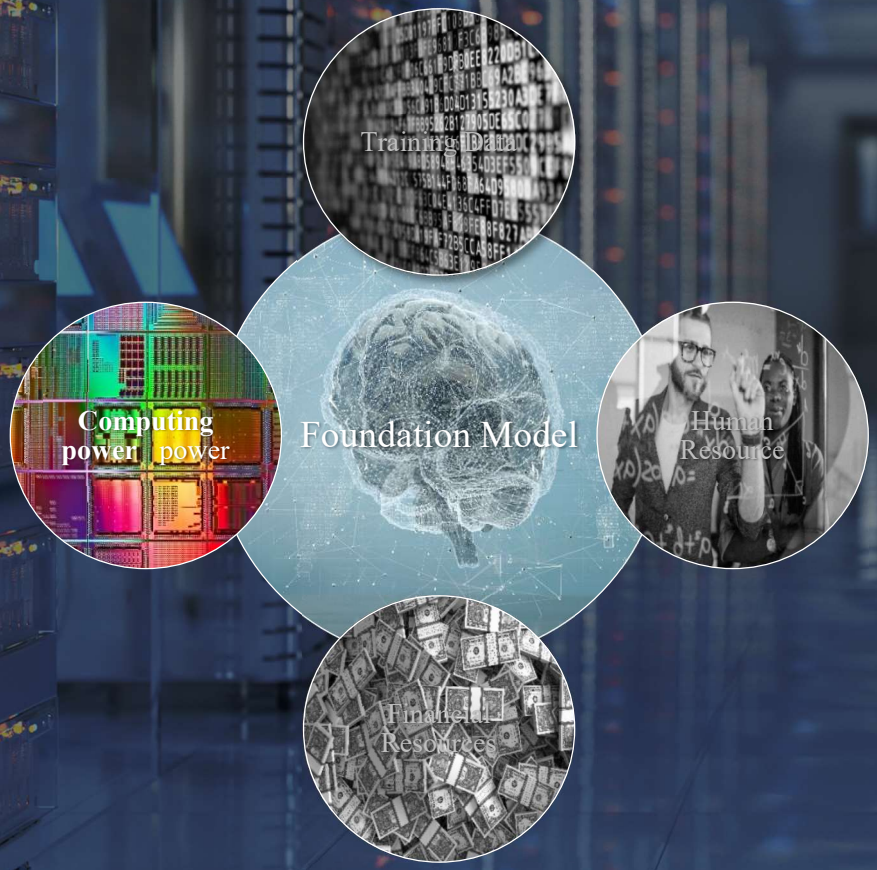


Human Resources

- The race to develop the foundation model for generative AI may evolve nonlinearly rather than linearly, and human resource is important to cause such dramatical innovation
- Therefore, acquisition of "genius" (i.e., intelligent engineers with great capabilities) is especially important for the development of competitive foundation model; Big Techs, including Google, are already ahead of the pack with large numbers of talented AI engineers
- Competition over the foundation model of Generative AI has an aspect of competition in the field of human resources
  - The acquisition of intelligent engineers is relevant to competition over the quality of the foundation model
  - The cost of hiring engineers is skyrocketing, and having a large number of engineers is relevant to the cost competitiveness of each business.
- With regard to ensuring competition in the human resources market, which is actively taking care of in the U.S., the agencies analysis of no-poaching agreements, cartels over wage levels, etc. are also suggestive with regard to the development of the foundation model.
- On the other hand, it might be argued that no-poaching agreements in the competition for talent have a pro-competitive effect by preventing major firms from reducing the competitiveness of new entrants in the event that "Killer Acquisition" is prohibited, or that restrictive actions regarding compensation levels have a pro-competitive effect by encouraging new entrants who lack the ability to pay high compensation to talented personnel. It could also be argued that restrictions on compensation levels might be pro-competitive because they could encourage new entrants who lack the ability to pay high compensation to talented individuals.

Major Inputs (3) Computing Power

- Foundation model and computing power

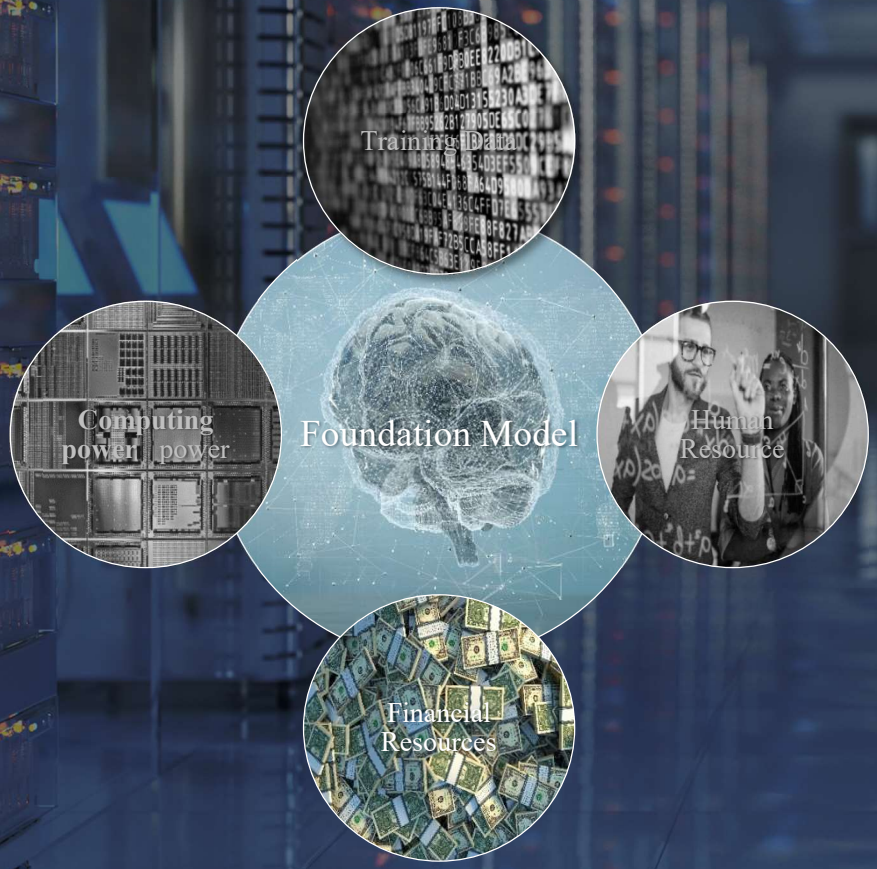


Computing power

- Extraordinary amount of computing power is required to build the foundation model for developing practical level Generative AI.
- Big Techs who have global-scale cloud computing foundation have an apparent advantage in terms of computing power
  - Amazon: Amazon Web Service
  - Microsoft: Microsoft Azure
  - Google: Google Cloud
- In addition, GPUs (Graphic Processing Units) with superior parallel processing capabilities have became a competitive factor in securing their supply
  - NVIDIA: H100
  - AMD: Instinct MI300X
- Vertical integration into the business of developing foundation models by GPU suppliers with computing power may be eye-opening trends as well

Major Inputs (4) Financial Resources

- Foundational model and financial resources



Financial Resources

- To increase the competitiveness of generative AI will require huge and expensive financial resources (i.e., enormous capital)
- Clear advantages exist for Big Techs that have capability of and have invested billions of dollars annually in R&D
- M&A, including investment in leading startups, will become important from the perspective of accelerating innovation.
  - Microsoft‘s investment in OpenAI ($10 billion scale)
  - Google‘s investment in Anthropic ($300 million scale)
  - Microsoft and NVIDIA’s invest in Infection AI ($1.5 billion scale)
- The issues of so-called “Killer Acquisition” may exist (but need to consider the fact that the discontinuation of the development of the technology is not always anticipated).
- Competition to obtain capital from financial market is important for entering and scaling foundation model developers
  - It is reported that start-ups engaging in the development of foundation model are suffering from gaining enough capital since the angel investors tend not to invest start-ups other than giant foundation model developers (e.g., NVIDIA).

4. GENERATIVE AI AND ANTITRUST/COMPETITION LAW AND POLICY

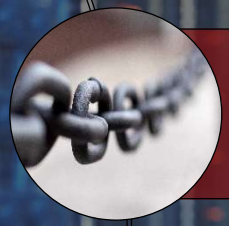
- Examples of Issues in Typical Area of Antitrust/Competition Law
- Possibility of Utilizing the Existing Expertise
- Points of Attention on Discussion of Generative AI and Competition/Antitrust Law
- Essential Points to Futher Analysis

Examples of Issues in Typical Area of Antitrust/Competition Law

Examples of issues in each area of antitrust and competition law

Horizontal Restrictions on Competition

- Restriction on competition over the foreclosure of development resources during the development phase of the foundation model
- Establishment of certain rules surrounding research and development of foundation models, etc.
- Similar/common output by using the similar/same foundation model for specific applications/services



Vertical Restrictions on Competition

- Refusal to provide the foundation model to application/services providers that implemented AI, business partner of foundation model suppliers, or self-preferential treatment (exclusionary type)
- Foundation model supplier's tie-in with other application services (exclusionary type)

Merger Control

- Killer Acquisition of innovative foundation model developers by other foundation model suppliers
- Elimination of downstream market competitors by acquisition of application/services operators by the foundation model supplier
- Elimination of competitors in the foundation model market through acquisition of computing equipment suppliers by foundation model suppliers

Considerations for Law Enforcement

- Need to understand technical aspects, need for enforcement against foreign operators
- Consideration of the particularity of the foundation model, which may also be important from an economic security perspective

Possibility of Utilizing the Existing Expertise

Generative AI and previous findings

- There is room to utilize the accumulation of surveys and research on competition in a wide variety of digital fields when examining Generative AI from the perspective of competition law.

Source: Prepared by the speaker based on the website of the Japan Fair Trade Commission

Points of Attention on Discussion of Generative AI and Competition/Antitrust Law

Future challenges regarding competitive analysis

- Concerning business activities related to Generative AI, there is a growing awareness worldwide of the need to analyze competition in each layer.
- On the other hand, there are other issues that may constitute points in competition analysis, such as issues arising from the peculiarities of foundation models as goods and services, such as the impact of linguistic differences on competition and the need for regulations from ethical and public perspectives.

Likelihood of changes in immobilized competitive conditions

- It seems clear that Generative AI is having a certain pro-competitive effect and transforming the competitive environment.
  - Use-case apps using Generative AI are spreading rapidly, and it is clear that businesses are becoming more active in creating new product/services.
  - Competition among Big Techs looks revitalized. It may be necessary to be paid attention to whether such observation is accurate or not, on the other hand, since there are reports that even after the enhancement of Bing by the Chat GPT, Google's market share has not substantially grown much.
  - It is perceived that NVIDIA's competitive position has improved dramatically as attention to GPU has increased rapidly in the infrastructure layer, particularly in the computing equipment market.

Essential Points to Further Analysis

Need for solid evaluation

- It is necessary to recognize the dramatic development of the Generative AI and the speed of business development by various businesses centering on Big Tech and should conduct solid antitrust/competition assessment instead of emotional reactions.
  - It is not necessary to consider generative AI as something different from existing technologies, and it is reasonable to consider it as an extension of previous discussions, such as those surrounding digital platforms in terms of antitrust and competition law, as the basis for evaluation.

Modest attitudes toward over-regulation

- Some have argued that the oligopoly that has developed in digital platforms should be regulated from an early stage to avoid making the same “mistake” with digital platform market
- However, in light of the following points, priority should be given to conducting a review of the actual business and competition environment and analyzing how competition is affected to avoid Type 1 errors (over-regulation due to errors)
  - Generative AI market is extremely dynamic and innovative where the competition environment and the factors shaping the environment change on a daily basis literally.
  - In the generative AI market, ensuring free and fair provision of the foundation model would be highly important in promoting competition

Speaker Profile

Yusuke Takamiya
Partner
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2008 Attorney at Law in Japan
Tokyo Bar Association
2017 Attorney at Law in New York State

Member of the Japanese Society of Economic Law
Members of the Competition Law Forum
Member of the Secretariat, Economic Law Research Association at Daini Tokyo Bar Association
Member of the Antitrust Law Section of the American Bar Association

Overview

- Specializing in domestic and overseas antitrust/competition laws and has numerous experiences in domestic notable projects, as well as in multipolar projects that require multipolar responses, including the United States, Europe, and China, with a focus on notifications related to business combinations, negotiations with competition authorities on obtaining clearance, dealing with cases of violations of cartels, etc., and dealing with authorities on lineup, as well as antitrust litigation.

Awards and Recognitions

- Coauthorship article "Japan Fair Trade Commission Publishes 'Green Guidelines" was selected as a candidate for Business Article category for "Concurrences Antitrust Writing Awards 2024"
- Selected in the area of competition law in the 2023 edition of Chambers Asia-Pacific
- Selected in the area of competition law in the 2023 edition of Law Business Research "Who's Who Legal: Global and Who's Who Legal: Japan

Major Publications

- "The Law Review: The Intellectual Property and Antitrust Review 8th Edition – Japan Chapter"(Law Business Research, August 2023 (co-authorship)
- "Some Considerations from the Characteristics and Practical Perspectives of the Green Guidelines" (Fair Trade 872, June 2023)
- "CPRC Discussion Paper, October 2021 (co-authored), "Regulating Competition Laws against Price Signaling: Arranging its Relationship to Unjust Restrictions of Trade Clauses Based on Discussions and Cases in Europe and the United States"
- "Efforts for Sustainability and Antimonopoly Law and Competition Law" (NBL1200, August 2021 (co-authorship))
- "Algorithmic Business Activities and Unjust Restrictions on Trade" (Fair Trade 812, June 2018)
- Points of Attention Regarding the Antimonopoly Act in Joint Ventures and Business Alliances (Top) (Bottom) (June 2018 issue of Business and Legal Affairs, May issue (co-authorship))

Background

2005 Graduated from the Faculty of Law, the University of Tokyo (LL.B.)
2007 Graduated from the University of Tokyo Law School (J.D.)
2015 Research assistant for Professor Eleanor M. Fox (International Competition Law)
2016 Graduated from the New York University Law School (LL.M)
2016 Gibson, Dunn & Crutcher LLP Washington DC offices (to 2017)
2017 International Visiting Consultant at the U.S. Federal Trade Commission
2017 Completion of the course for EU Competition Law at King's College of London (PG Diploma)
2017 Visiting researcher at the Competition Policy Research Center of the Japan Fair Trade Commission's Center (to 2019)
2018 Members of the project "Innovation and Competition" at the Research Institute for the Economy, Trade and Industry (Present)
2022 Members of "the advisory board for establishing Guidelines for Business Activities for the Realization of a Green Society" at the Japan Fart Trade Commission and "the Study Group on Competition Policy for the Realization of a Green Society" at the Ministry of Economy, Trade and Industry
2023 Graduated from the Doctoral Course for the Graduate School of Law, Kobe University (Ph.D.)
2023 Visiting lecturer at the Faculty of Law of Rikkyo University "Practical Seminar in Competition Laws"

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