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**From ‘Search’ to ‘Interactive Dialogue’  
Deploying Generative AI to Generate New Possibilities for Job Creation  
dip Launches Development of AI Agent Business Based on  
Collaborative Research with Matsuo Lab, under  
the Advisership of Mr. Kazuto Ataka**

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dip Corporation is pleased to announce that it will launch the development of an AI agent business (the “Business”), a new initiative deploying generative AI technology. It has also established dip Technology Institute (the “Institute”) to enable early commercialization of the business. Under the advisership of Mr. Kazuto Ataka, a leading figure in data strategy, we will engage in collaborative research with Matsuo Institute, Inc., a company that applies the results of studies by the University of Tokyo’s Matsuo Lab, a lab specializing in AI strategy. By working to solve various problems in the labor market with two of Japan’s leading figures in data technology, we aim to realize a society in which everyone can experience the joy and happiness of work.



The Japanese labor market currently faces numerous issues such as serious labor shortages due to an aging and shrinking population as well as low labor efficiency owing to a delay in the adoption of digital technologies. As a result, the role of the personnel services industry has been increasing each year.

dip, which operates one of Japan’s largest job information websites Baitoru, among others, has invested in more than 20 startups since 2016 through ‘AI Now’,\*1 one of Japan’s largest websites dedicated to AI, ‘AI Accelerator’, an AI startup support program, and the CVC ‘DIP Labor Force solution Fund’. It has been working to solve the problems of the labor market through the use of cutting-edge technology by embarking on the DX business in 2019, and launching the KOBOT series, which is a SaaS service adopted by more than 10,000 companies to date. In 2021 it also obtained certification as a certified DX business operator as defined by the Ministry of Economy, Trade and Industry. dip will now deploy generative AI and launch the development of an AI agent business to realize ‘the job search of the future’, which will greatly broaden the possibilities of job creation.

Due to technological innovations such as generative AI, job hunting is expected to evolve from the conventional method of searching and choosing from a vast number of job postings to a new method of finding the right job through interactive dialogue, which should significantly enhance hiring rates. dip will contribute to creating opportunities to find the right job interactively by increasing matching accuracy through high-quality data such as our own job information gathered by recruitment consultants across Japan as well as job seekers’ apparent and latent needs.

## Background

Despite the improvement in the efficiency of the recruiting process brought about by online job information services, the hiring rate of those who visited job information websites is not sufficiently high. While job agency services, in which applicants and jobs are matched by humans in order to improve the accuracy of matching, have been in growing demand as a high-class recruitment service, their utilization rate remains around 20%.<sup>\*2\*3</sup> It is natural for job agency services to focus on high income range users, as the services require labor costs and their revenue is determined by multiplying the successful applicant's annual income by the commission rate. We believe that those most in need of our job agency services are 'people with problems in the job search', we have been considering the development of a service in which AI replaces job agency operations as a solution to this problem.<sup>\*4</sup> With the AI agent business, we will update the revenue structure of job agency services through the use of generative AI technologies, such as ChatGPT, which have the potential to replace much of the work currently performed by humans, so that we can realize a society in which everyone can use job agency services easily and experience the joy and happiness of work.

\*1 <https://ainow.ai/>

\*2 "Labor Force Survey" by the Ministry of Internal Affairs and Communications and the "Aggregate Results of Business Reports for the Employment Placement Business" by the Ministry of Health, Labor and Welfare

\*3 "Human Resources Business 2022" by Yano Research Institute Ltd.

\*4 The act of recommending a portion of jobs on a job site while all jobs can still be searched is not considered to constitute "employment placement" under the guidelines. This service will be operated in accordance with the relevant laws and regulations by utilizing the "gray zone elimination system" of the Industrial Competitiveness Enhancement Act and confirming whether or not it constitutes "employment placement" under the Employment Security Law.

### ▼ Outline of AI agent business

The AI agent business is a new business that dip, which operates one of Japan's largest job information websites Baitoru, has launched as an initiative to expand the possibilities of job creation through the use and practical application of generative AI technology. Through this business, we aim to transform job hunting methods from the conventional method of 'searching and choosing from a vast number of job postings' to a new method of 'finding the right job through interactive dialogue', thereby significantly improving hiring rates.

Unlike conventional chatbots, which generate responses based on programmed rules and logic, the new technology uses natural language processing to generate more natural responses. Interactive dialogue also enables us to understand the potential needs of each individual and to offer timely support, such as encouraging them to take appropriate action at times. Therefore, it has the potential to achieve the most appropriate matching equal to or better than matches brokered by human recruiting agents. However, matching accuracy must improve in order for this technology to be used by a broad range of job seekers. It is therefore important to apply the latest and most reliable information and data from employers. Through this business, we will contribute to creating opportunities for job seekers to find the best workplace by enhancing matching accuracy through the use of the latest and most accurate job information gathered by our approximately 2,000 recruitment consultants across Japan. In addition to that data, we will listen to what each job seeker says and how they behave to create the best individual match possible. We aim to commercialize the business within a year.

### ▼ Outline of dip Technology Institute

The Institute will engage in industry-academia collaborative research with Matsuo Institute, Inc., a company that applies the results of studies by Matsuo Lab of the University of Tokyo's Graduate School of Engineering. We will present the research and prototypes within the Institute, and those evaluated as suitable for social implementation will be implemented in our products.

Examples of planned industry-academia collaboration themes:

Replacement of job agency services by interactive agents

Replacement of job ad manuscript preparation by automatic text generation

Organization:

Adviser: Professor Kazuto Ataka of the Faculty of Environment and Information Studies, Keio University

Director: Kei Shinto, Corporate Officer and Head of Service Development Group, dip Corporation

Comments and profile of Mr. Yutaka Matsuo

A technology called the large language model is undergoing rapid progress in the field of artificial intelligence. Following the launch of various models by big tech firms, including ChatGPT, I have no doubt that this technology will have an impact on a broad spectrum of society. The field of human resources will also change dramatically with the new technology. It is very significant to be among the first to work with this technology in the field. I am looking forward for the development of dip Technology Institute through our collaborative research.



#### Profile:

Graduated from the Department of Information and Communication Engineering, Faculty of Engineering of the University of Tokyo in 1997. Received a Ph.D. degree from the Graduate School of Engineering of the University of Tokyo in 2002. Became researcher at the National Institute of Advanced Industrial Science and Technology in 2002. Following a stint as Visiting Scholar at Stanford University starting in August 2005, he became Associate Professor at the Institute of Engineering Innovation, Center for Knowledge Structuring, and the Department of Technology Management for Innovation of the Graduate School of Engineering, the University of Tokyo in 2007. He was appointed Co-Representative and Project Associate Professor of the endowed course on global consumption intelligence, the Department of Technology Management for Innovation of the Graduate School of Engineering, the University of Tokyo in 2014. He has been serving as Professor at the Research into Artifacts, Center for Engineering, the Department of Technology Management for Innovation of the Graduate School of Engineering, the University of Tokyo. He specializes in artificial intelligence, deep learning, and web mining. He received the Best Paper Award (2002), the 20th Anniversary Project Award (2006), the Field Innovation Award (2011), and the Distinguished Service Award (2013) from The Japanese Society for Artificial Intelligence (JSAI). At JSAI, he served as Student Editor and Editor before being appointed Associate Editor-in-Chief in 2010 and Editor-in-Chief and Board Member in 2012. He was Chair of the ELSI Committee from 2014 to 2018. He has been serving as President of Japan Deep Learning Association since 2017 and External Board Director of the SoftBank Group since 2019.

#### Profile of Mr. Kazuto Ataka

Professor of the Faculty of Environment and Information Studies, Keio University; Senior Strategist at Z Holdings Corporation

After working for McKinsey & Company, Inc., he joined Yahoo Japan Corporation in 2008. At McKinsey & Company he worked in the development of a broad range of merchandise and businesses and in brand re-establishment as a core member of the Asia-Pacific Region of the Marketing Research Group. He was appointed CSO of Yahoo Japan in 2012 and Senior Strategist at ZHD in 2022. He has been teaching at Keio University's SFC since 2016 and has been serving as Professor of the Faculty of Environment and Information Studies (concurrent post) since autumn 2018. He has been serving as a Director and the Chair of the Skill Definition Committee of The Japan Data Scientist Society since spring 2013. He is also Representative of A Worthy Tomorrow, a Specialist Committee Member of the Council for Science, Technology and Innovation (CSTI) and Chair of the Cabinet Office's Digitalization for DRM (Future Vision Team), and is involved in many public reviews by the national government and the Keidanren on science & technology and dataxAI. He received a Ph.D. degree in neuroscience from Yale University. His books include *Shin Nihon* (2020. NewsPicks Publishing) and *Issue Driven* (2020. Eiji Press).



#### Overview of dip

dip operates a personnel recruiting services business and a DX business based on its vision of becoming a 'Labor force solution company' that works to solve various problems in the labor market with the aim of realizing a society in which everyone can experience the joy and happiness of work. Under a corporate philosophy of 'Here at dip, we want to tap into dreams, ideas and passion to create a better society', we will contribute to realizing a sustainable society through our business activities.

Company name:	dip Corporation
Representative:	Hideki Tomita, Representative Director, President and CEO
Headquarters:	Roppongi Grand Tower 31F, 3-2-1 Roppongi, Minato-ku, Tokyo Phone: +81-3-5114-1177 (Main)
Established:	March 1997
Capital:	1,085 million yen (As of February 28, 2023)
Number of employees:	2,925 (Full-time employees as of April 1, 2023; excluding contract, part-time and temporary employees)

Business activities: Operation of job information websites such as Baitoru, Baitoru NEXT, Baitoru PRO and Hatarako.net, and nurse career change support service Nurse de Hatarako; development and provision of DX service KOBOT; and others

Stock listing: Tokyo Stock Exchange (Prime Market)

Net sales: 49.3 billion yen (Fiscal year ended February 28, 2023)

Corporate website URL: <https://www.dip-net.co.jp/en>

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