Implementation Report

2021 International Conference on Computer Auditing in Tokyo

September 2021

International Computer Auditing Education Association of Japan

Introduction

Due to COVID-19, it is assumed that companies may allow special measures such as emergency response and unprecedented response that cannot be handled by conventional internal control, and there is risks of fraud and errors. It can be said that the opportunities of occurring risks and errors are increasing.

For this reason, auditors are required to perform higher quality audits than ever before, and technology-based auditing methods are attracting attention in remote environments.

However, there are many futuristic contents such as AI audits which can be seen on the Web etc., and there is very few specific information that can be provided such as how to utilize technology for audits at this time.

In addition, it is difficult to collect the directions that regulators and research institutes are thinking in a timely manner, and I thought that there might be needs to know more about "what I should do now".

In order to meet the needs, I aimed to create an opportunity that 2021 International Conference on Computer Audit was held for the purpose of gathering and discussing people from four positions, an audit industry (Certified Public Accountant), regulators (FSA, UK FRC), business world (internal auditor), research institutions (universities / graduate schools).

I aimed to create an opportunity that think about "what I should do now" by having people from each position give a lecture on "What is data analysis in auditing and how will it be developed in the future?"

We would be happy if we could provide such an opportunity to everyone who watched it.

September 2021

International Computer Auditing Education Association of Japan

Representative Director Keiji Yumiba

# Contents

1. Conference Concept

2021 International Conference on Computer Audit will be held for the purpose of gathering and discussing people from four positions, an audit industry (Certified Public Accountant), regulators (FSA, UK FRC), business world (internal auditor), research institutions (universities / graduate schools). These four positions are all interested in utilizing IT, including computer audit education and data analysis.

The concept is below.

"Understanding the current status, challenges, and future of data analysis in auditing, including overseas. ~ Understanding Data Analysis in Auditing from Four Positions~"

We would like to achieve our aims which it is for attendees to understand that "What you should do now by understanding the current situation, issues, and the future direction of Data Analysis in Auditing".

We try to be an open information sharing place in order to achieve above aims.
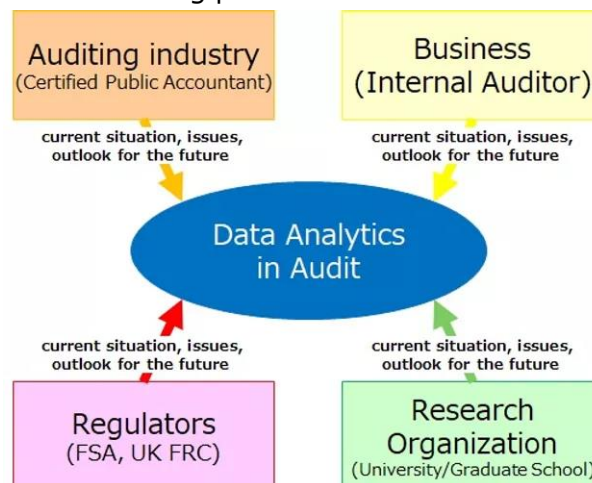
I believe that it was an opportunity for the participants to understand the current situation, issues, and future direction of "data analysis in auditing" and to think about "what I should do now".

2. Conference Summary

- **Date :** September 10, 2021, 10: 00-18: 00
- **Venue :** Zoom Webinar (with simultaneous Japanese / English interpretation)
- **Theme**
  Understand the current status, issues, and future of "Data Analysis in Auditing"
  -Understanding "Data Analysis in Auditing" from four positions (*)-
  * Audit industry (Certified Public Accountants), regulators (Financial Agency, UK FRC), Business world (internal auditor), Research institutes (university / graduate school)
- **Significance of participation**
  It will be an opportunity to think about "what I should do now" By grasping the current situation, issues, and future direction of "data analysis in auditing" including overseas.

3. Program list

Time	Title	Speakers
10：00～ 10：05	Opening remarks	Mr. Keiji Yumiba ICAEA JAPAN Representative Director
10：05～ 10：25	Evolutionary direction and technology that audit should aim for	Mr. Masahiko Tezuka The Japanese Institute of Certified Public Accountants Chairman and President
10：25～ 10：35	Computer Auditing: The way forward after COVID-19	Mr. Shi-Ming (Jack) Huang ICAEA International Chairman National Chung Cheng University, Taiwan Dean/Professor
10：35～ 10：45	World Computer Auditing Awards	Mr. Shi-Ming (Jack) Huang ICAEA International Chairman National Chung Cheng University, Taiwan Dean/Professor
10：45～ 11：15	Technological Resources, Using Technology to Improve Audit Quality	Mr. Jason Bradley The UK's Financial Reporting Council (FRC) Project Director, Audit & Assurance Policy
11：15～ 11：35	Use of Technology to Improve Audit Quality	Ms. Kaori Nishiyama FINANCIAL SERVICES AGENCY(FSA) JAPANESE GOVERNMENT Director for Enforcement of Corporate Disclosure, Policy and Markets Bureau
11：35～ 11：55	Which direction is better for the audit industry, whether data analysis experts should be trained in auditing, or auditing experts should be trained in data analysis?	Mr. Tetsuo Shibaya Grant Thornton Taiyo LLC, Senior Partner, Head of Audit Headquarters Certified Public Accountant
13：00～ 13：20	Talents in the audit data analytics market	Mr. Tawei (David) Wang DePaul University, USA Associate Professor and Driehaus Fellow School of Accountancy & MIS
13：20～ 14：10	The current situation, issues and outlook for the future of "Data Analytics in Audit"	Moderator: Mr. Keiji Yumiba Panelists: Mr. Jason Bradley, Ms. Kaori Nishiyama, Mr. Hidehiko Yuki, Mr. Tetsuo Shibaya, Mr. Takashi Niidetani
14：10～ 14：30	"Comfortable control" for teleworkers -Utilization for PC	Mr. Fumihiro Takahashi Bellsystem24 Holdings, Inc. Internal Audit

| Time	Title	Speakers
	device log	Group Group Manager
14：45〜 15：05	A Fast Adoption Methodology of Continuous Auditing in SAP ERP Environment	Miss. Sherry Huang Chair, ICAEA Taiwan Chapter CEO, Jacksoft Commerce Automation Ltd., Taiwan
15：05〜 15：25	Current status and issues of data analysis utilization in internal audit and prospects	Mr. Satoru Goto SanKei Biz Consulting, Corp. Operating Officer
15：25〜 15：55	The current situation, issues and outlook for the future of "Data Analytics in Audit"	Moderator: Mr. Tetsushi Ueno Panelists: Mr. Fumihiro Takahashi, Mr. Shoji Morino, Mr. Yuji Ishibashi, Mr. Masashi Sato, Mr. Takenobu Toku
15：55〜 16：15	Post COVID-19, Counter Strategy for Auditing Method Changing	Mr. Chu Bue-geum ICAEA KOREA President Artner Consulting Co., Ltd. Chief Executive Officer
16：30〜 16：50	Significance of Data Analytics for Auditors	Mr. Toshifumi Takada ICAEA JAPAN Executive Adviser Tohoku University Professor Emeritus National Chung Cheng University, Taiwan Professor
16：50〜 17：10	Combined Assurance	Mr. Ezz Hatab ICAEA Middle East Chapter, UAE President
17：10〜 17：30	Artificial Intelligence – A solution for external auditing?	Mr. Georg Herde Business Administration and Business Informatics, Deggendorf Institute of Technology, Germany Professor
17：30〜 18：00	How can AI Audit affect Auditors' Responsibility ?	Mr. Hiroshi Taki Ritsumeikan University, Japan Professor
18：00〜 18：05	Closing remarks	Mr. Keiji Yumiba ICAEA JAPAN Representative Director

4. Application and registration status

The number of people who applied for the conference, hereinafter referred to as applicants, was 481. Of these, about 80% were applications from the audit industry.

Of the applicants, 454 were registered with Zoom to participate in the conference, hereinafter referred to as registrants. In addition, a total of 438 people participated in the conference, hereinafter referred to as participants.

All applicants from regulatory and research institute were registered, also applicants from audit industry and business world registered more than 90%, as a result, nearly 95% of them registered overall.

Please refer to the graph below for the specific breakdown.

"Attribute" is a questionnaire at the time of Zoom registration, and the answer from "Business world / Research Institute / Regulatory Authority / Audit Industry / Others" about affiliation of applicants.
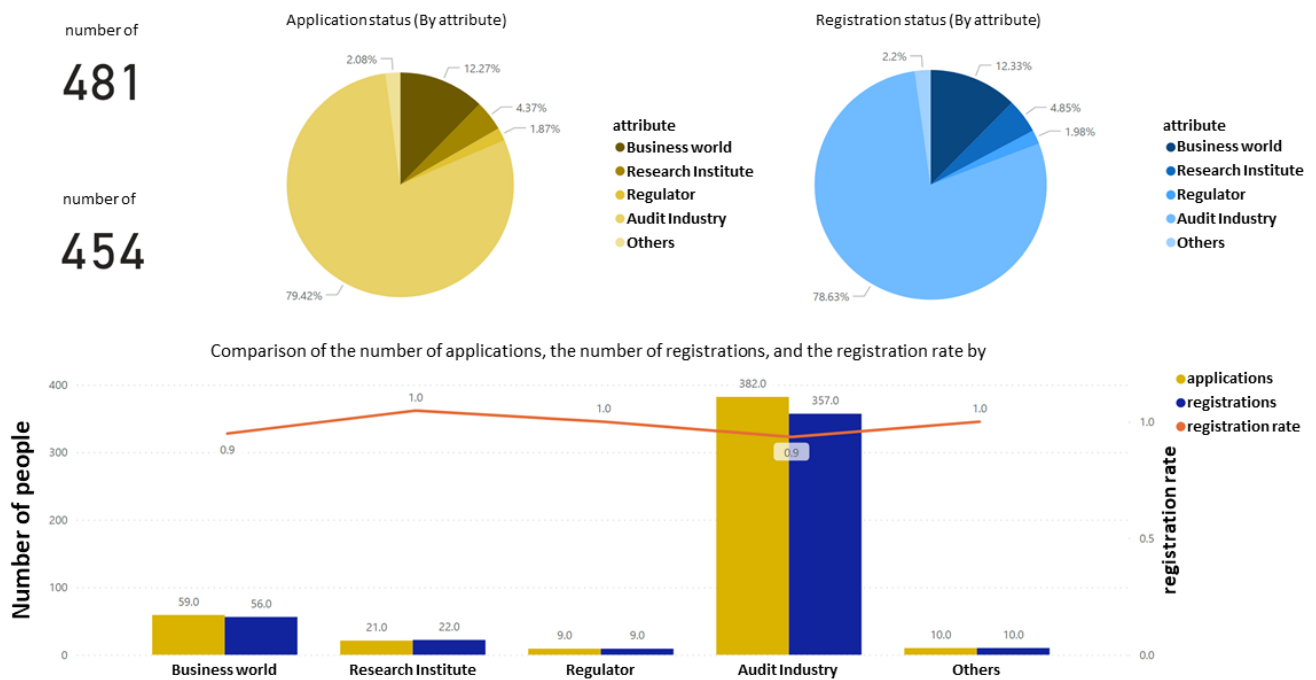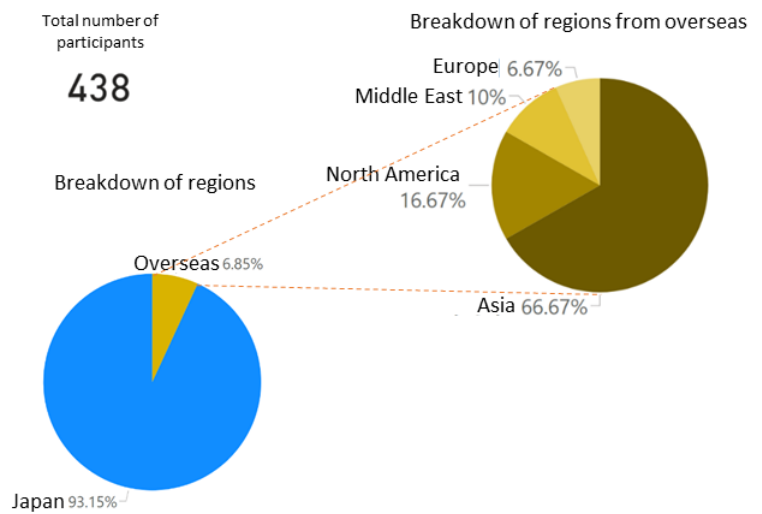
5. Overview of participants

(1) Breakdown by country

Of the participants, 93% were from Japan and 7% were from overseas. From overseas, 9 countries participated, with 67% of the participants from Asia, followed by 17% in North America.

35% of the speakers were from overseas, and they gave lectures on the current situation in their regions.

Total number of participants

438

Breakdown of regions

Overseas 6.85%

Japan 93.15%

Breakdown of regions from overseas

Europe 6.67%
Middle East 10%
North America 16.67%
Asia 66.67%

(2) Breakdown by attribute

Of the 438 participants, about 73% were from the audit industry and about 15% were from the business world. Although the number of participants from research institutes and regulator is not large, it can be said that the conference was attended by people from various positions.

Breakdown by attribute of participants

Others 3.88%
Business world 14.61%
Research Institute 5.94%
Regulator 2.28%
Audit Industry 73.29%
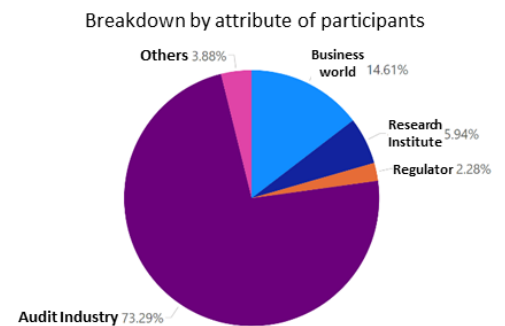
6. Questionnaire analysis

Participants in the conference were asked to cooperate in the questionnaire at the time of registration, hereinafter referred to as the pre-questionnaire, and after the completion, hereinafter referred to as the post-questionnaire. We have summarized the opinions on the conference from the results of the questionnaire.

In the pre-questionnaire, participants gave their opinions on the sessions they were interested in, and in the post-questionnaire, they gave their opinions on the sessions that left an impression on them. The number of respondents to the post-questionnaire, hereinafter referred to as the number of respondents to the questionnaire, was 148.

(1) Pre-questionnaire: Expectations for the conference

In the pre-questionnaire, we asked them to write comments about "Expectations for the conference".

Here, the comment was analyzed using the co-occurrence network diagram of the text mining tool "KH Coder". A co-occurrence network diagram is a network like diagram of how "words" are used in similar contexts.

The co-occurrence network diagram of "Expectations for the conference" is as follows.
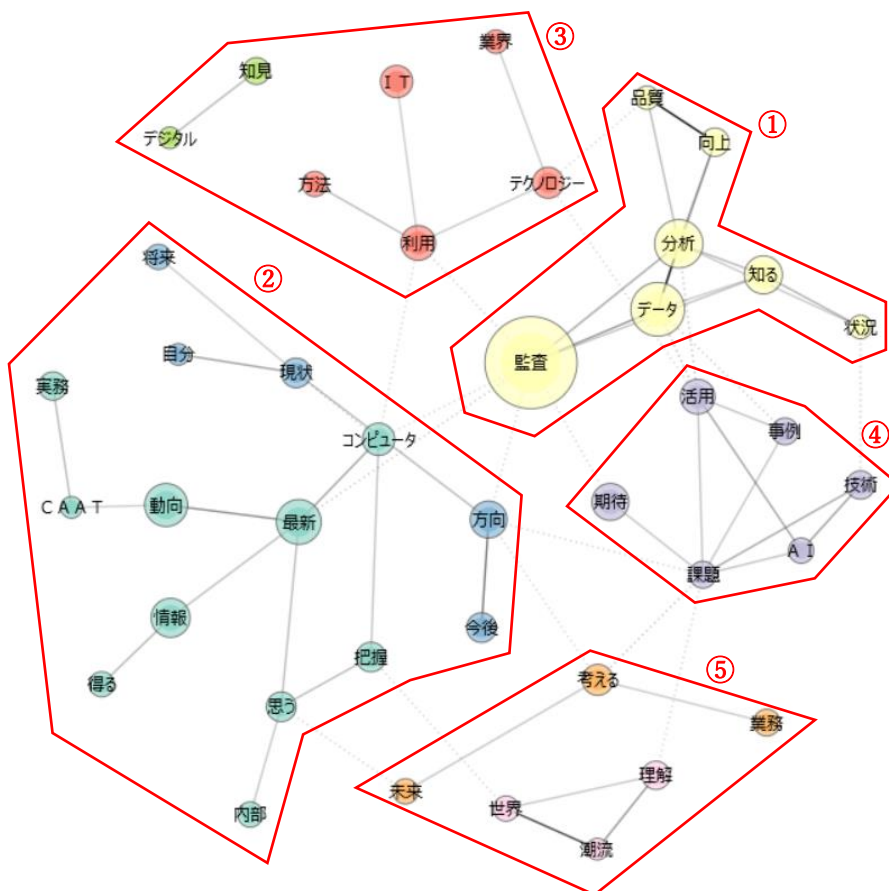
According to the above co-occurrence network diagram, expectations for the conference were described in five major themes.
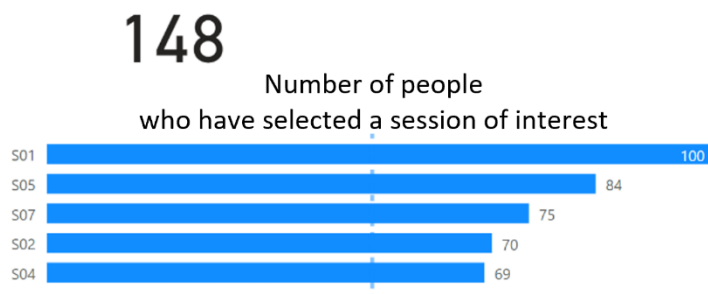
① Want to know the status of data analysis in auditing

② Want to know the latest trends regarding CAATs

③ Want to know information on how to use IT technology in the audit industry.

④ Want to know about issues related to the use of AI in audits and future expectations.

⑤ Want to know about the world situation and trends

It can be read that each of them wants to be an opportunity to collect the latest information on data analysis in auditing and information on the world.

(2) Pre-questionnaire: About "Interesting Sessions"

Of the 17 sessions, the top 5 sessions selected as "interesting sessions" in the pre-questionnaire are as follows. Three of the five sessions were sessions of overseas speakers, and it seems that many people were interested in overseas information.
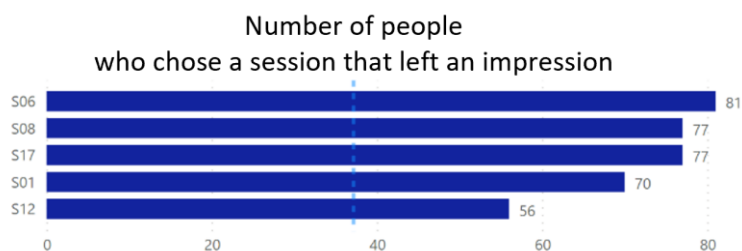
Number of survey respondents

148

Number of people
who have selected a session of interest

Session	Count
S01	100
S05	84
S07	75
S02	70
S04	69

S01: Mr. Masahiko Tezuka - Evolutionary direction and technology that audit should aim for
S05: Ms. Kaori Nishiyama - Use of Technology to Improve Audit Quality
S07: Tawei (David) Wang Ph.D., - Talents in the audit data analytics market
S02: Shi-Ming (Jack) Huang Ph.D., - Computer Auditing: The way forward after COVID-19
S04: Mr. Jason Bradley - Technological Resources, Using Technology to Improve Audit Quality

(3) Post-questionnaire: About "Impressive Sessions"

The top 5 sessions selected as "Impressive Sessions" in the post-questionnaire were as follows.

Number of people
who chose a session that left an impression

Session	Count
S06	81
S08	77
S17	77
S01	70
S12	56

● "S06: Which direction is better for the audit industry, whether data analysis experts should be trained in auditing, or auditing experts should be trained in data analysis?" (Mr. Tetsuo Shibaya)

This theme is of interest to anyone in the auditing industry, and I suspect it is a trial-and-error theme.

Mr. Shibaya gave an easy-to-understand and polite explanation of the actual efforts and philosophies of the audit corporation to which he belongs, which seems to have left a lasting impression on many participants.

- S08: Panel discussion (presented by Financial Services Agency, Audit Corporation, JICPA, UK FRC)

    In this session, a panel discussion was held with the participation of regulators, The Japanese Institute of Certified Public Accountants, and audit corporations. We exchanged opinions with panelists on the theme of "How much data analysis is being used in the audit industry !?" In addition, since the participants' awareness survey was conducted in real time and opinions were exchanged based on the results, I think that the panelists could have made frank comments.

    The following is a discussion of the content of the awareness survey and the responses of the participants.

    A total of 303 people participated in this awareness survey. The classification of participants is as follows.
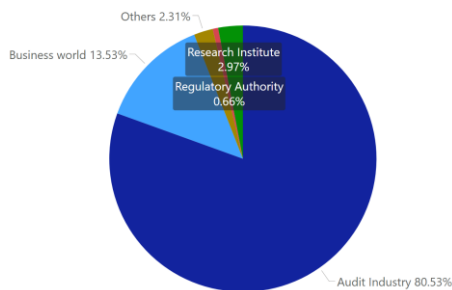
    Participants in the audit industry, which account for 80% of the above categories, have been further subdivided.

    Specifically, I classified participants who belong to audit corporations with more than 1,000 partners and employees as "major", participants who belong to audit corporations with less than 1,000 partners and employees as "small and medium-sized", and other participants as "others".
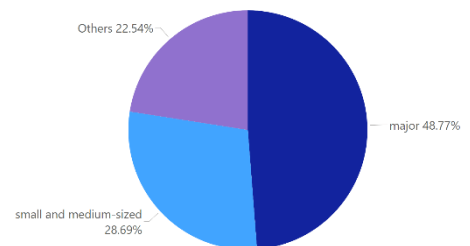
    As a result, around half was the "major" participants and around 30% was the "small and medium-sized" participants. The specific ratio is as shown on the right.

[Q1] How pervasive is the data analysis method in the audit site? hereafter, the degree of penetration of data analysis
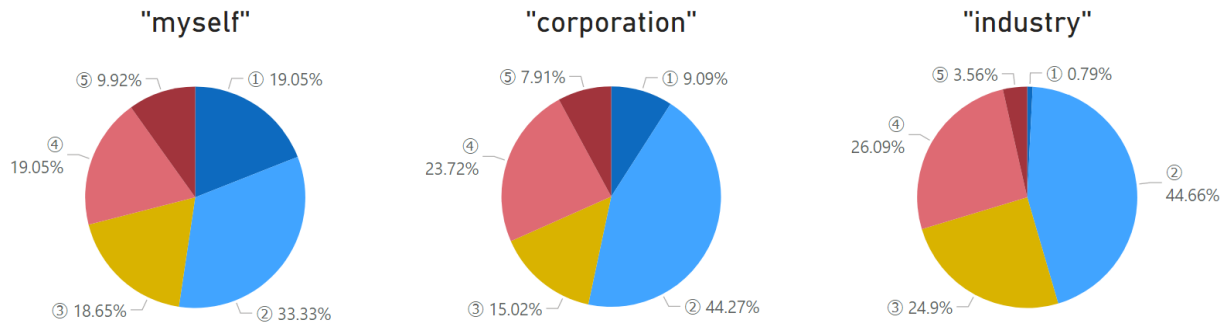
    Regarding the above questions, there are three levels: "Jobs I am involved in, hereinafter, myself", "Audit corporation / company to which I belong, hereinafter, corporation", and "Whole audit industry, hereinafter, industry". So, we asked them to answer from the choices of "① very permeated, ② permeated to some extent, ③ neither can be said, ④ not so permeated, and ⑤ not permeated at all."

    Since "myself" is the participant's own recognition, it is an index that shows the actual

situation, and "corporation" and "industry" are the participants' assumptions, so it is presumed that they are indicators that are close to the actual situation.

In the following discussion, in order to analyze the overall tendency, for convenience, "① very permeated / ② permeated to some extent" is "permeated" and "④ not so permeated / ⑤ Not permeated at all" is expressed as "not permeated", and "③ I can't say either" is expressed as "I don't know".

The answers of all the participants were as follows.

"myself" — ⑤ 9.92% / ① 19.05% / ④ 19.05% / ③ 18.65% / ② 33.33%

"corporation" — ⑤ 7.91% / ① 9.09% / ④ 23.72% / ③ 15.02% / ② 44.27%

"industry" — ⑤ 3.56% / ① 0.79% / ④ 26.09% / ② 44.66% / ③ 24.9%

As for the degree of penetration of data analysis, "not permeated" (④ and ⑤ in the above figure) was that the participants in all " myself ", "corporation", and "industry" were about 30%. On the other hand, "permeated" (① and ② in the above figure) was that "myself" and "corporation" was more than 50%, but "industry" was 45%, and the decrease was "I don't know" (③ in the above figure).

It is presumed that this means that "myself" and "corporation" can grasp the actual situation but cannot grasp the actual situation of other companies.
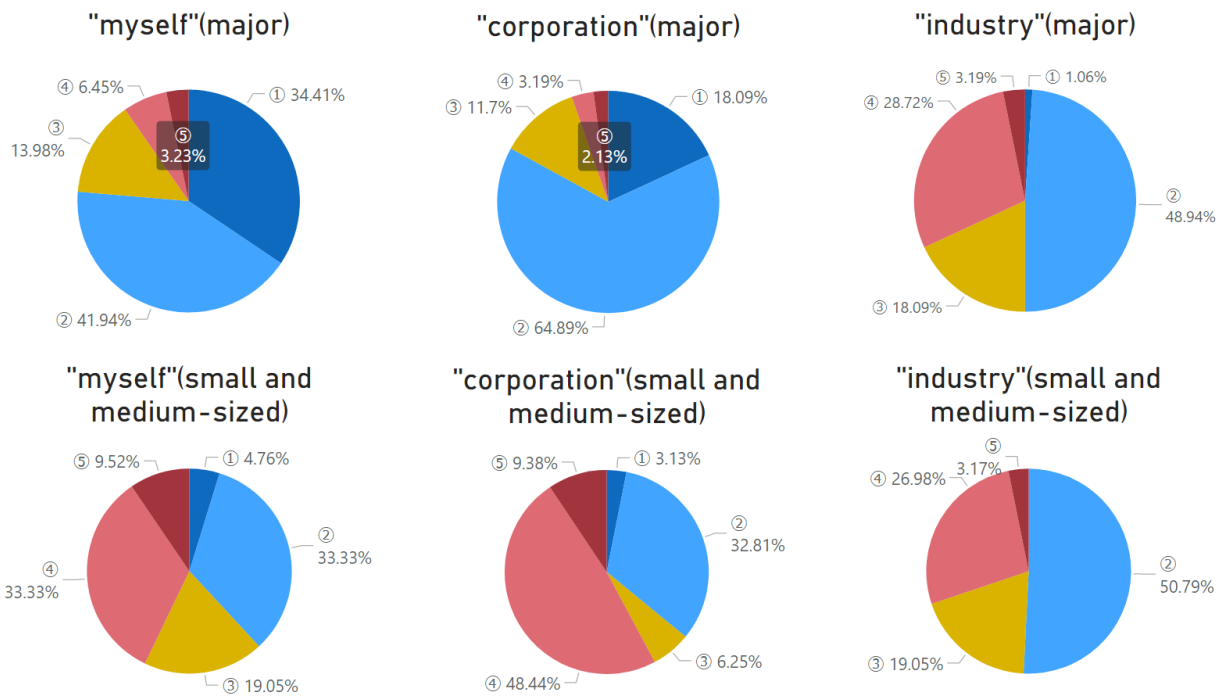
In the panel discussion, we received opinions from panelists based on this result.

Firstly, there were opinions that the penetration of "industry" was within or higher than expected, but most of the opinions were that the penetration of "myself" and "corporation" was unexpected. In particular, "① very permeated" was surprisingly close to 20% for "myself." there were opinions that the result was different from what was expected, because many of the participants in the conference were strong in technology. There were also multiple opinions that there may be considerable differences between major audit corporations and small and medium-sized audit corporations.

Secondary, "not permeated" (④ and ⑤ in the above figure) was that "myself", "corporation", and "industry" were all around 30%. In response to this result, the panelists mentioned the need to raise the overall level.

We have verified the differences in consciousness between the participants of major audit corporations and small and medium-sized audit corporations in order to test the panelist's hypothesis that "there may be considerable differences between major audit corporations and small and medium-sized audit corporations. The results are below.

Regarding the distinction between major audit corporations and small and medium-sized audit corporations, as described on the previous page, the number of partners and employees is more than 1,000 as "major", and less than 1,000 as "small and medium".

"myself"(major)

④ 6.45%
③ 13.98%
⑤ 3.23%
① 34.41%
② 41.94%

"corporation"(major)

④ 3.19%
③ 11.7%
⑤ 2.13%
① 18.09%
② 64.89%

"industry"(major)

⑤ 3.19%
① 1.06%
④ 28.72%
② 48.94%
③ 18.09%

"myself"(small and medium-sized)

⑤ 9.52%
① 4.76%
② 33.33%
④ 33.33%
③ 19.05%

"corporation"(small and medium-sized)

⑤ 9.38%
① 3.13%
② 32.81%
③ 6.25%
④ 48.44%

"industry"(small and medium-sized)

⑤ 3.17%
④ 26.98%
② 50.79%
③ 19.05%

Firstly, 76% of "major" and 38% of "small and medium-sized" were "permeated" of "myself" (① and ② in the above figure). This result may be suggestive that while nearly 80% of the participants, belonging to "major", practice data analysis, only about 40% of the participants, belonging to "small and medium-sized", practice data analysis. On the other hand, 10% of "major" and 43% of "small and medium-sized" of "myself" were "not penetrated" (④ and ⑤ in the above figure). This result shows that there is a considerable difference between "major" and "small and medium", as the panelists expected.

Secondary, the "permeated" of "corporation" (① and ② in the above figure) was 83% for "major" and 36% for "small and medium-sized". And "not permeated" of "corporation" (④ and ⑤ in the above figure) was "major" 5% and "small and medium-sized" were 58%. In both cases, the difference between "major" and "small and medium-sized" is larger than that of "myself". As a result, there might be possibilities that the participants who chose "not permeated" among the "small and medium-sized" participants in "myself" felt that "the whole corporation might be permeating". Also, there might be possibilities that in "myself", those who chose "permeated" among "major" participants felt that "if it is a corporation, it might not be permeating".

Finally, the "permeated" of "industry" (① and ② in the above figure) was 50% for "major" and 51% for "small and medium-sized", and "not permeated" for "industry" (④ and ⑤ in the above figure) was 32% for "major" and 30% for "small and medium-sized", indicating that there is no big difference between "major" and "small and medium-sized". This result might suggest that the assumption of "major" participants have less the degree of permeating of data analysis for "small and medium", and the assumption of "small and medium" participants have more the degree of permeating of data analysis for "major".

This result might suggest that the assumption of "major" participants have less the degree of permeating of data analysis for "small and medium", and the assumption of

"small and medium" participants have more the degree of permeating of data analysis for "major".

[Q2] What measures are effective in instilling (further) data analysis in auditing?
(Multiple selections are possible)

The options were:

①Proactively send messages from regulator and the Institute of Certified Public Accountants
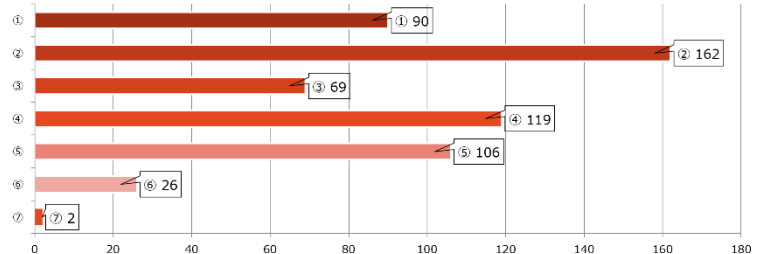
②Develop an educational program

③ Make it a required subject for the qualification test

④ Make it an essential item for audit procedures

⑤ Create a mechanism to evaluate the auditor's data analysis ability

⑥ Other

⑦ I don't know

As a result, "② Develop an education program" was the most common, followed by "④ Make it an essential item for audit procedures" and "⑤ Create a mechanism to evaluate the data analysis ability of auditors." Various comments were received from the panelists regarding this result.

For example, according to Mr. Jason Bradley of the UK FRC, there are many "① Actively send messages from regulatory agencies and accountant associations" in the UK. In addition, there was a negative comment on "④ Make it an essential item for audit procedures." The reason was that it was impossible to make it mandatory because the necessity of data analysis is decided according to the circumstances of the company. Mr. Hidehiko Yuki of the Japanese Institute of Certified Public Accountants made a similar comment on this.

According to Mr. Takashi Niidetani of KPMG AZSA LLC, the most common answer was "② Develop an education program", and the results were his expected. Furthermore, he mentioned that regarding the content of education, not only the education of data analysis tools but also the education of data analysis tools is important. He also commented on the importance of education on understanding information systems, which are essential for data analysis.

[Q3] Who should demonstrate leadership in promoting measures to (further) permeating data analysis in audits?

The options were:

①Should be led by regulator

②Should be led by each audit corporation

③Should be led by the operating company

④Should proceed in cooperation with regulator, audit corporations, and business companies

⑤Should be led by the software company

⑥Should be promoted by individual study

⑦Other

⑧I don't know

⑤
⑦ 2.89% ┐ ┌1.24%
③ 7.44%
⑧ 0.83%
① 10.33%
⑥ 2.07%
④ 50%
② 25.21%
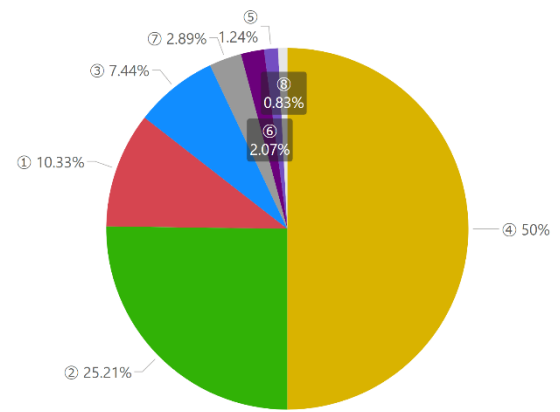
As a result, "④Should proceed in cooperation with regulatory agencies, audit corporations, and operating companies" was the most common, followed by "②Should be led by each audit corporation" and "①Should be led by regulator". Various comments were received from the panelists regarding this result.

For example, Ms. Kaori Nishiyama of the Financial Services Agency stated that each has an entity to work on and that each measure is expected to be implemented consistently, and then when designing the system, she commented that she would like to actively utilize the mechanism to incorporate the opinions of the private sector. In addition, Mr. Jason Bradley of the UK FRC commented that he would like to proceed not only with public-private partnerships but also with international collaborations.

In this session, we proceeded with the theme of "How much data analysis is being used in the audit industry !?", by listening to the comments of panelists based on the results of the participants' awareness survey. It seems that many participants were impressed by the fact that they were able to hear the actual situation and the frank opinions of each panelist.

- S17: Impact of AI audits on auditors' responsibilities (Mr. Hiroshi Taki)

    How can AI Audit affect Auditors' Responsibility? (Mr. Hiroshi Taki)

    I think this session was a lecture that would guide auditors on how to approach AI Auditing. I think that the presentation, which focuses on legal liability due to misjudgment on auditing by using the technology of AI Auditing, is inferred from the guidelines on AI use in the medical field published by the Ministry of Health, Labor and Welfare, was convincing to the auditors.

- S01: Evolutionary direction and technology that audit should aim for（Mr. Masahiko Tezuka)

    In this session, it was emphasized that it is important not only to issue correct audit reports, but also to enhance the social effect of audits, that is, to have an awareness of improving the quality of financial products. Mr. Tezuka gave a lecture to the effect that by

utilizing technology, aiming to carry out value-added audits from compliance-type audits, the accumulation will lead to reliable audits.

Many participants seem to be impressed by the clear and easy-to-understand explanation of the ideal form of auditing that will be required of auditors from the perspective of audit quality, and the meaning of technology and human resources to realize it.

- S12 Audit Data Analytics in remote environments and the Future of Internal Auditors

    In this session, a panel discussion was held with practicing internal auditors who are studying audits using data analysis on a regular basis at a study group hosted by ICAEA JAPAN.

    We could hear the live voices of practicing internal auditors about the current state of internal audits utilizing data analysis in a remote environment, the challenges of DX conversion, and what kind of internal auditors they want to become in the future.

    We talked about the "real" of each panelist, regarding as the following issues.

    -even if they want to perform data analysis, there are high hurdles at the time of data acquisition

    -the significance of auditing by using data analysis does not easily permeate within the company

    -data analysis itself is still a special skill.

    On the above issues, they felt that challenges faced in the field such as the reality of lack of human resources and skills that can be implemented, and the solutions to them.

    There was also a concrete discussion about the future of internal auditors, such as what kind of internal auditors they feel that they need to be in the coming AI auditing era.

    It seems that the live voice of such an practicing internal auditor struck a chord with many participants and left an impression on them.

(4) Post-questionnaire: About "the degree of utilization of data analysis for business"

The answer to the question, "Are you doing business using data analysis?", was as follows.

The options are as follows.

①Already practice data analysis as a normal business

②Being using it, but in the process of trial and error.

③Haven't used it, but would like to incorporate data analysis in the future.

④Data analysis is not used and there are no plans to use it in the future.

⑤Other

④ 1.35%
③ 21.62%
⑤ 2.7%
① 26.35%
② 47.97%
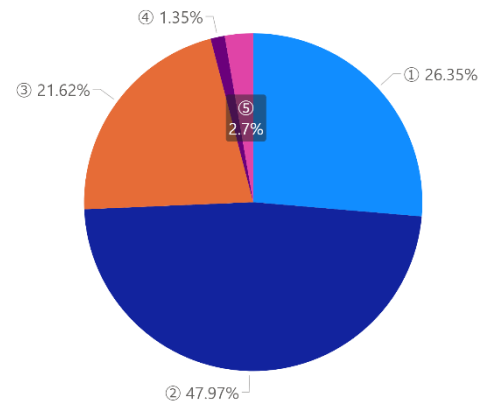
Approximately 74% of the total (① and ② in the right figure) are already practicing data analysis, but nearly half of them (② in the right figure) are doing trial and error, and more than 20% of the total (③ in the right figure) shows that data analysis is not currently used, but they would like to incorporate it in the future. The results show that about 96% of participants believe that data analytics should be applied to their work.

(5) Post-questionnaire: About "frequency of this conference"

The results of the frequency of this conference are as follows.

The options are as follows.

①Every year

②Every two years

③Every three years

④No need to be held

⑤Other

⑤ 5.41%
③ 5.41%
② 25%
① 64.19%
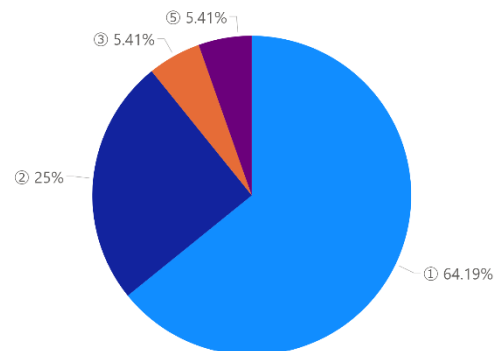
It was found that about 95% of the people (① to ③ in the right figure) think that this conference should be held in the future. As you can see from the results of the questionnaire on "Points that you felt meaningful at the conference" in the next section, one of the reasons is that there are few opportunities to hear the voices of people from various positions at the same time, including overseas.

(6) Post-questionnaire: About "Points that you felt meaningful at the conference"

The following is a co-occurrence network diagram of "points that you felt meaningful at the conference".
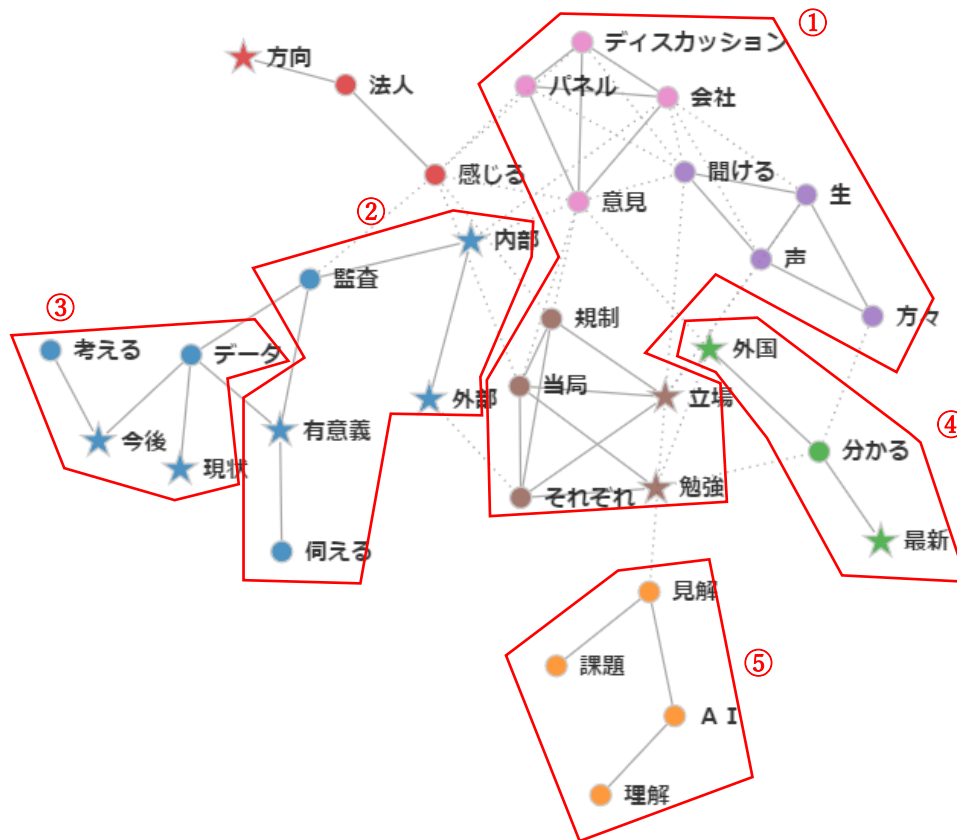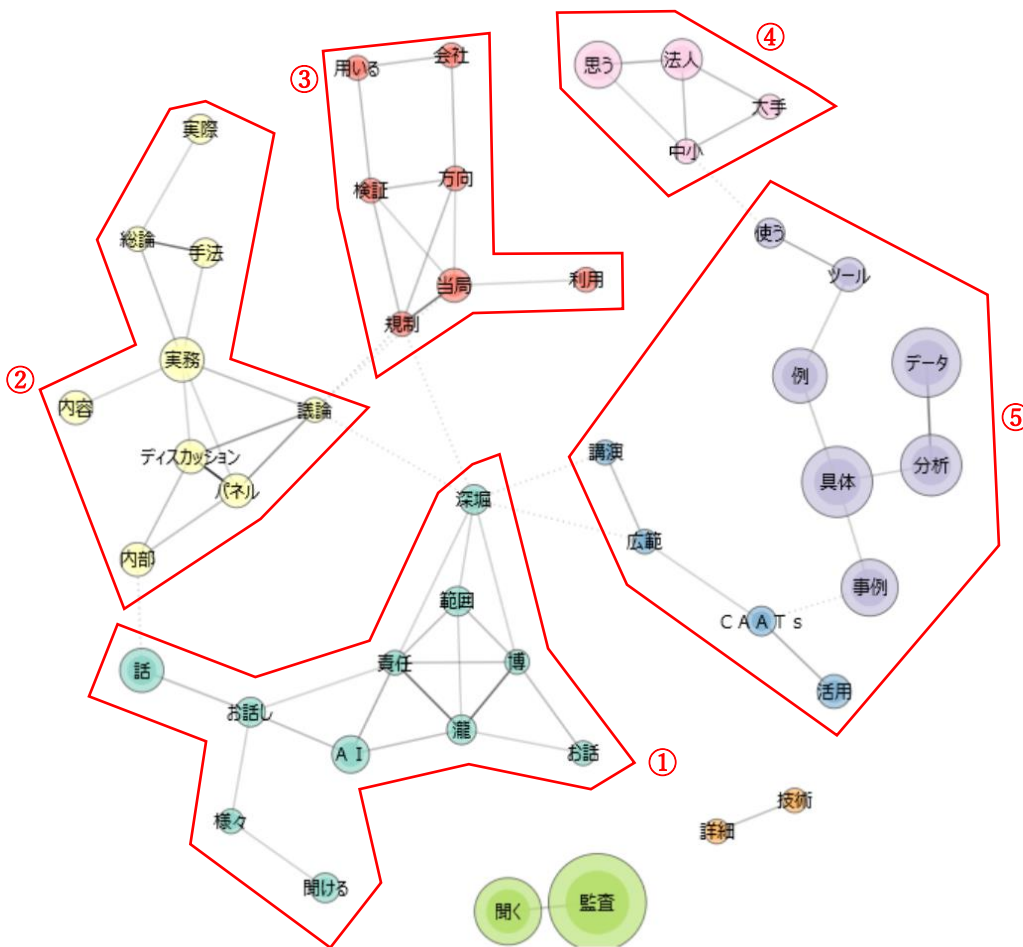

Analyzing the contents of the questionnaire based on the above co-occurrence network diagram, it seems that many participants felt that it was meaningful from the following viewpoints.

①Could hear the live stories of people in various positions

②Could hear the stories of both the internal auditor and the external auditor at the same time.

③Could understand the current situation and future direction

④Could access the latest information including overseas

⑤Could understand the issues when using AI for auditing.

(7) Post-questionnaire: About "what you wanted to hear more at the conference"

The following is a co-occurrence network diagram of "what you wanted to hear more at the conference".


Analyzing the contents of the questionnaire based on the above co-occurrence network diagram, the following is an example of the theme that you wanted to hear in more detail.

①AI audit and auditor responsibility

②Discussion that deeply digs into practical issues

③Direction of data analysis and verification within regulator

④Efforts related to data analysis of each audit corporation

⑤Cases (cases that have been made more efficient by introducing CAATs, cases of utilization other than accounting data, cases of fraud detection, etc.)

(8) Post-questionnaire: About "opinions and impressions"

The following is a co-occurrence network diagram of "opinions and impressions".
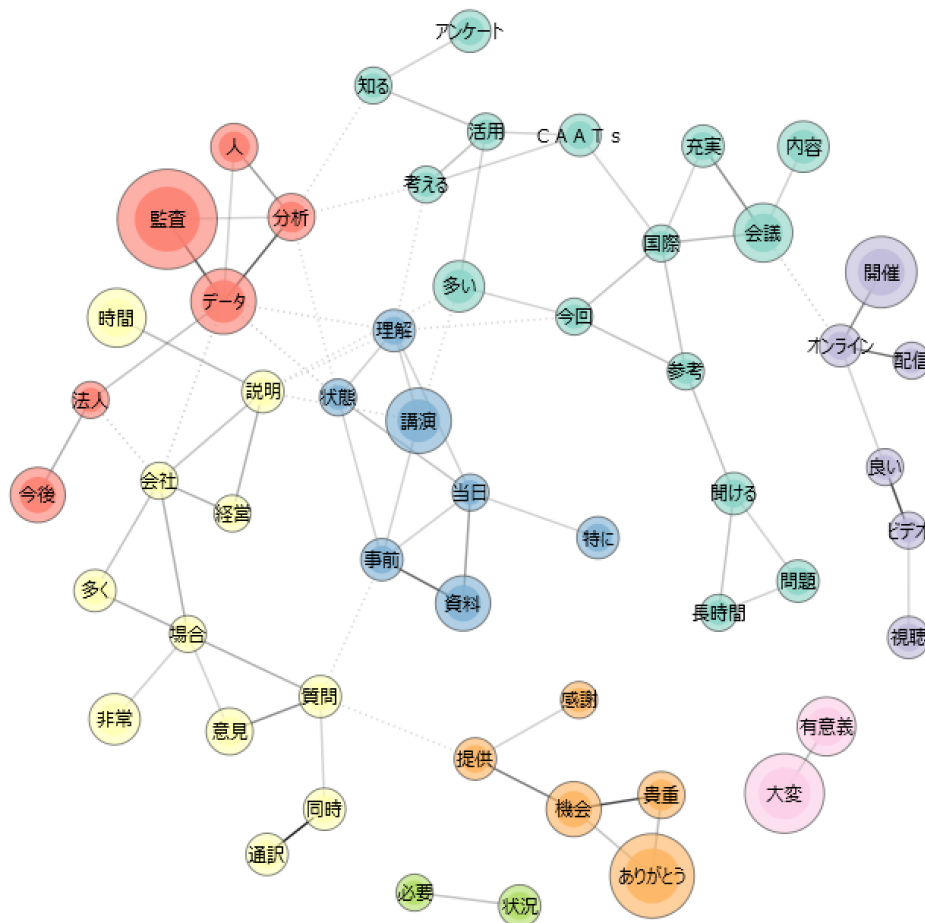
It seems that this conference was regarded as a valuable opportunity, and we received words of gratitude from many people. In addition, the simultaneous interpretation and questioning methods were well received. Regarding the content, we received the opinion that the lecturer's interesting stories did not bother us for a long time, but we also received the opinion that the day was too long. We also received suggestions that it would be better to distribute the lecture materials in advance. We would like to reflect these opinions in the next planning and plan a better event.

7. Conclusion

The "2020 Computer Audit International Conference" scheduled last year has been postponed for one year because of the COVID-19, and the title has been re-held as "2021 Computer Audit International Conference in Tokyo".

The concept of this conference was "Understanding the current status, issues, and future of data analysis in auditing" -Understanding "Data analysis in auditing" from four positions-, but I decided to use this concept triggered by an email. The email was from Mr. Jason Bradley of the UK FRC who spoke at the conference, and he wrote that he was interested in the conference. At first, I was confused by an unexpected email from a British regulator, but while exchanging emails, Mr. Jason Bradley's enthusiasm was conveyed, and I was convinced that he would participate. At that time, I didn't even have acquaintances at the Financial Services Agency, which is a Japanese regulator, and I couldn't not imagine that I let alone ask an overseas regulator to give a lecture.

Anyway, I came to know that Mr. Jason Bradley could be a lecturer at the conference, then I needed to consider what kind of theme was best with Mr. Jason Bradley as a lecturer.

First, I thought about what kind of information the world is looking for under the theme of "data analysis in auditing" rather than being feasible / impossible.

I have experienced CAATs education and CAATs introduction support for auditors of audit corporations and business companies for 25 years at an audit corporation and 4 years after retiring from an audit corporation. Although the purposes of external auditor audits and internal auditor audits are different, I felt that there were few opportunities to share information on the same conference, even though there were many things in common in terms of utilizing data analysis. Also, I came to think it would be a unique international conference if you could give a lecture to the regulators who are mainly deeply involved in external auditor audits and the research institutes that are indispensable for the development of the audit industry. Then I decided the concept of the conference above.

After the concept of the conference was decided, in order to ask the lecturer who follow the concept to give a lecture, I consulted with various people, and I was very grateful that lecturer who are active in various places accepted our offer of giving their lecture.

After the lecturer was decided, we wanted as many people as possible to listen to their lecture. Then as a result of attracting as many customers as possible, more than 400 people participated. And then, according to the post-questionnaire "opinions and impressions" was highly evaluated by many people.

Last but certainly not least, I would like to express my sincere gratitude to the lecturer, supporting companies, and members of ICAEA for their cooperation in holding this conference.

September 2021

International Computer Auditing Education Association of Japan

Representative Director Keiji Yumiba

【References】

Outline of speakers and lectures

(1) Lectures

Mr. Masahiko Tezuka -The Japanese Institute of Certified Public Accountants ・Chairman and President -Certified Public Accountant (CPA)	**Title : Evolutionary direction and technology that audit should aim for** As the word VUCA (＊) indicates, it is very difficult to see the future of society and the economy. As future uncertainties about corporate performance increase, there is no doubt that society's needs for reliable corporate information disclosure will increase. In other words, it can be said that higher quality audits are required than ever before. In this situation, I will talk about the evolutionary direction that audit should aim for and the role that technology plays. •A word made by combining the acronyms of the four words Volatility, Uncertainty, Complexity, and Ambiguity.

Shi Ming (Jack) Huang Ph.D., -ICAEA International ・Chairman -National Chung Cheng University, Taiwan ・Professor	**Title : Computer Auditing: The way forward after COVID-19** COVID-19 has pushed organizations over the technology tipping point and transformed e-business forever. However, for CPAs or auditors, it remains challenging for the capability building in audit data analytics and machine learning. In this session, Dr. Jack Huang will discuss how important it is to learn new computer auditing for auditors, how important it is to have a good digital mindset and computer auditing competency.

Mr. Jason Bradley -The UK's Financial Reporting Council (FRC) ・Project Director, Audit & Assurance Policy	**Title : Technological Resources, Using Technology to Improve Audit Quality** Technology, and its use in audit, is increasingly at the forefront of discussions between regulators, standard setters, and audit practitioners. Audit firms and third-party providers have committed significant financial and human resource to developing and deploying technology in audits, leading to a significant increase in its usage. Jason Bradley will discuss the work they have undertaken in the last 2 years to develop an understanding of how technology may be used to improve audit quality and describe their views on technology as a regulator.

Ms. Kaori Nishiyama -FINANCIAL SERVICES AGENCY (FSA) JAPANESE GOVERNMENT ・Director for Enforcement of Corporate Disclosure, Policy and Markets Bureau	**Title : Use of Technology to Improve Audit Quality** Expectations for technology are rising to improve audit quality. I would like to share with you through this conference so that the public and private sectors can collaborate, focusing on the current situation, challenges, and expectations of Japanese regulators regarding the use of technology by auditors to perform audits.

Mr. Tetsuo Shibaya -Grant Thornton Taiyo LLC ・Senior Partner, Head of Audit Headquarters -Certified Public Accountant (CPA)	**Title : Which direction is better for the audit industry, whether data analysis experts should be trained in auditing, or auditing experts should be trained in data analysis?** Digitization of audits is essential for maintaining and improving audit quality control. I don't think there are any experts who disagree with the opinion. On the other hand, many leaders in the audit industry do not have the expertise to analyze data. Most leaders agree when asked if they are willing to transform the audit work site, but when asked if they want to use data analytics by themselves, the answers might vary. Planning decisions regarding data analysis personnel may lead to the characteristics of future audit quality at each audit firm. I will introduce our efforts in this lecture.

Tawei (David) Wang Ph.D., -DePaul University, USA ・Associate Professor and Driehaus Fellow School of Accountancy & MIS -The American Accounting Association, AAA ・Midwest Region President -Fulbright Specialist Roster: analytics curriculum for accounting programs	**Title : Talents in the audit data analytics market** Audit data analytics has attracted a lot of attention in recent years. However, for audit firms, it remains challenging when recruiting talents in audit data analytics. In this session, Mr. David Wang will discuss a research project focusing on the characteristics and flows of audit data analytics experts of the top 10 audit firms in the U.S.

Mr. Fumihiro Takahashi -Bellsystem24 Holdings, Inc. ・Internal Audit Group Group-Manager -International Certified CAATs Practitioner (ICCP) -Systems Auditor (AU)	**Title : "Comfortable control" for teleworkers Utilization for PC device log** Bellsystem24 Group is a leading company in the call center industry and is also certified by the Ministry of Internal Affairs and Communications as one of the "100 Best Telework Pioneers". For this reason, we are actively promoting initiatives such as thorough distribution of notebook PCs to employees who are managers or above, including contract employees, and teleworking the call center function itself. On the other hand, there seems to be little information on practical cases of support and control for employees who work in the "invisible situation" of telework. In this lecture, practicing internal auditors will talk about internal audits that should be aimed at, not just monitoring while utilizing CAATs, with their own cases.
Miss. Sherry Huang -ICAEA Taiwan Chapter ・Chair -Professional Development Committee, IIA Taiwan ・Chair -Jacksoft Commerce Automation Ltd., Taiwan ・CEO	**Title : A Fast Adoption Methodology of Continuous Auditing in SAP ERP Environment** Continuous Auditing is a strategic information system for an enterprise to automate control examining, risk assessment and compliance by using data analytic technology. However, for the internal audit department, it remains challenging when adopting the new technology. In this session, Sherry Huang will discuss a fast adoption methodology of Continuous Auditing in the SAP ERP environment. It will show three industry case studies and show the life cycle of the adoption for the new technology.
Mr. Satoru Goto -SanKei Biz Consulting, Corp. ・Operating Officer -International Certified CAATs Practitioner (ICCP)	**Title : Current status and issues of data analysis utilization in internal audit and future prospects** The move to incorporate data analysis into internal audit is accelerating, partly due to the social trend promoting DX. The lecture will focus on points to keep in mind and tips when incorporating data analysis into internal audit.

Mr. Chu Bue-geum -ICAEA Korea ・President -Artner Consulting Co., Ltd. ・Chief Executive Officer -Certified Internal Auditor (CIA) -Certified Information Systems 　Auditor (CISA)	**Title : Post COVID-19, Counter Strategy for Auditing Method Changing** COVID-19 Pandemic is accelerating a drastic change in audit techniques globally. Because of that, it is increased to need a change of strategic audit techniques effectively. To use of the CAATs is rising for solving the challenge more and more. And the CAATs capability will be most important competency to overcome the issue. Mr. Chu Bue geum who is one of the best internal audit specialists has 27 years-experience as Deloitte Risk Advisory Services Director and Member of the committee to Public Institution management assessment (Ministry of Economy and Finance, 2016) in Korea will discuss needs to enhance auditor's CAATs capabilities and data driven internal audit with his insights.

Toshifumi Takada Ph.D., -ICAEA JAPAN Executive Adviser -Tohoku University ・Professor Emeritus -National Chung Cheng University, 　Taiwan ・Professor	**Title : Significance of Data Analytics for Auditors** **〜How do they control uncertainty in auditing〜** Development of information technology and its use in practice has become a challenging task for auditors. Big accounting firms have developed computer audit applications and the use of such techniques is required from clients to achieve high quality auditing. In this keynote speech, I will pick up the topic about the methods how to decrease uncertainty (=the degree of ignorance caused on the side of auditors). My discussion is from academic. As a conclusion, I will propose the significance of using Data Analytics combined with information technology.

Ezz Hatab Ph.D., -ICAEA Middle East Chapter, UAE ・President -ALDAR University College, Dubai 　UAE ・President	**Title : Combined Assurance** Enterprises nowadays are overwhelmed with many reports that are being generated from different assurance providers including the external and internal auditors. However, still there is a chance to combine all these reports to develop a more holistic view of the enterprise risk. Ezz Hatab will discuss the problem caused by multiple assurance providers and the solution by optimizing the coverage of assurance providers on the risk areas affecting the enterprise. Further he will discuss an automated solution using Galvanize technology to obtain a fully integrated and data driven assurance.

	Title : Artificial Intelligence A solution for external auditing?
Georg Herde Ph.D., -Business Administration and Business Informatics, Deggendorf Institute of Technology, Germany ・Professor	Artificial Intelligence (AI) is in a booming time and lots of resources are channeled in this direction. There are already some tools on the growing market who apply AI in their analytics. In my speech I'll discuss, from an academic point of view, what kind of obstacles we will have to overcome to solve some basic problems which not lonely come up by using AI in audit scenarios. Those hurdles are, to a certain extent, well known since we use data analytics. Are those challenges obsolete just because we are using AI?

	Title : How can AI Audit affect Auditors' Responsibility ?
Hiroshi Taki Ph.D., -Ritsumeikan University, Japan ・Professor	Looking at the transparency reports of major audit firms in recent years, it seems that they have already developed machine learning audit tools and introduced them to audit jobs. However, for machine learning such as deep learning, the judgment process is a black box, and not only is the basis for the judgment unclear, but it is also difficult to clarify the cause of the judgment error. In this lecture, I would like to unravel the legal responsibilities of auditors in audits using AI from the ideal collaborative relationship between AI and humans.

(2) Panel Discussion

Title	The current situation, issues and outlook for the future of "Data Analytics in Audit"
Moderator	**Mr. Keiji Yumiba** -ICAEA JAPAN Representative Director

Many people may be interested in how much data analysis is used in the audit industry, whether it is external audit or internal audit. Therefore, in this panel discussion, panelists will discuss the results while taking questionnaires from the participants. The questions are below.
・ How pervasive is the data analysis method in the audit site?
・ What measures are effective in instilling (further) data analysis in auditing?
・ Who should demonstrate leadership in promoting measures to (further) permeating data analysis in audits?

Panelists

Mr. Jason Bradley
-The UK's Financial Reporting Council (FRC)・Project Director, Audit & Assurance Policy

Ms. Kaori Nishiyama
-FINANCIAL SERVICES AGENCY(FSA) JAPANESE GOVERNMENT
・Director for Enforcement of Corporate Disclosure, Policy and Markets Bureau

Mr.Hidehiko Yuki
-The Japanese Institute of Certified Public Accountants
・Managing Director of IT
-Certified Public Accountant (CPA)

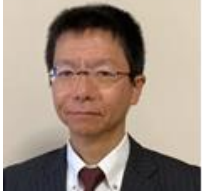

Mr. Tetsuo Shibaya
-Grant Thornton Taiyo LLC
・Senior Partner, Head of Audit Headquarters
-Certified Public Accountant (CPA)

Mr. Takashi Niidetani
-KPMG AZSA LLC
・ Digital Innovation Division Partner
-Certified Public Accountant (CPA)

Title	Audit Data Analytics in remote environments and the Future of Internal Auditors
Moderator	**Mr. Tetsushi Ueno** -ICAEA JAPAN Managing Director

Due to the spread of remote work and restrictions on site visits, internal audits are also required to be transformed by utilizing technology by promoting DX, and it can be said that the introduction of audits by using data is no longer inevitable.
Therefore, in this panel discussion, leading-edge practicing internal auditors will read "Data analysis in audits" with the following themes.
・ What is the current state of auditing by using data in a remote environment?
・ What are the challenges facing the internal audit department to respond to digital transformation?
　・ What is the future of internal auditors in the age of AI?

Panelists

Mr. Fumihiro Takahashi
-Bellsystem24 Holdings, Inc.
・Internal Audit Group Group-Manager
-International Certified CAATs Practitioner (ICCP)
-Systems Auditor (AU)

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