

Reading the *Kuratomi Yūzaburō Diaries* with the SMART-GS Application

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Deciphering and Publishing the *Kuratomi Yūzaburō Diaries*

Kuratomi Yūzaburō (1853-1948) was a Japanese politician and bureaucrat, active in the Meiji, Taishō and Pre-war Shōwa eras. His career led him through various positions in the Ministry of Justice, the Japanese Government-General in Korea, the Cabinet, the Ministry of the Imperial Household, and the Privy Council, of which he subsequently became president in 1926, and served in that role until 1934. He is known mostly for his extensive and detailed diaries describing the real state of affairs in the aforementioned institutions, containing a remarkable amount of information Kuratomi obtained in the course of his duties, during conversations with other high-ranked officials. The diaries' readers have in their hands a valuable and rich source of historical facts regarding the Imperial Court, the Privy Council, the judicial circles, and the Government-General in Korea, virtually absent in other sources.

Since the Modern Japanese Political History Materials Room of the National Diet Library made them available to the public, the diaries have been quoted in numerous studies. Earlier research concentrated around the Privy Council in the late Taishō and early Shōwa eras, however after the Shōwa emperor's death, the scholars' point of interest shifted more towards the Imperial Court of 1920s. The author himself used the Kuratomi diaries in his research on that topic.¹⁾

The author first came across the diaries around 1993, during work on a biography of Saionji Kinmochi. A mere glance through the Kuratomi's writings revealed them as an account of great significance for studies of modern Japanese history comparable to that of the Hara diaries, a view shared by many

¹⁾Nagai Kazu, *Seinen Kunshu Shōwa Tennō to Genrō Saionji*, Kyoto 2003.

other scholars. However, an enormous amount of text in the manuscripts,²⁾ combined with sloppy, cramped handwriting, made them practically unreadable except for trained specialists. Their number was very limited, and as they mostly focused on specific entries related to their own research, presumably none of them read the whole contents.

From his first contact with the diaries, the author believed this precious historical source should be made available not only for the narrow circle of specialists, but also for the average reader, from both Japan and overseas. This belief eventually led to establishment of the Research Society for the Kuratomi Yūzaburō Diaries (*Kuratomi Yūzaburō Nikki Kenkyūkai*) in 2008,³⁾ with a task to decipher and subsequently publish the text.

The main goal of the Society is to issue in print the parts considered most valuable from an academic point of view, i.e. those covering years 1919-34 and 1905-06. In October 2010, the 1st volume of *The Kuratomi Yūzaburō Diaries* (years 1919-20) was published by Kokushokankokai, followed by the 2nd volume (years 1921-22) in June 2012. The 3rd volume (years 1922-24) is slated for publishing in 2014.

In order to deal efficiently with such voluminous work, SMART-GS, an ICT application currently under development by the Department of Humanistic Informatics, Graduate School of Letters, Kyoto University as a tool supporting philological and historical research, has been implemented. SMART-GS was created by Professor Hayashi Susumu of the Department of Humanistic Informatics for a purpose of his own studies in the field of history of mathematics. It is designed to manage digital images of old handwritten documents, and bind them with various text data, including translations,

²⁾ The diaries that have been preserved until now, comprise 304 volumes describing the period between January 1919 and November 1947, and 8 volumes of the daily record of Kuratomi's work as Chief Prosecutor at the Tokyo Court of Appeal between July 1905 and August 1906. Except for 7 last volumes (January 1945-November 1947), the remaining 301 volumes are stored in the National Diet Library.

³⁾ At the moment of its inception, the Research Society for the Kuratomi Yūzaburō Diaries was constituted by the following members: Nagai Kazu, Katsuragawa Mitsumasa, Mikawa Jōji, Miyata Masaaki, Lee Sungyup, Sano Masafumi, Tominaga Nozomu, Lu Xyueying, Kawasaki Akira, Koyama Toshiki, and Kawanishi Hideya.

annotations, or links to the Internet sources. SMART-GS allows to add to a digitalized document notes and remarks in the same way it would be done on a paper copy with a pen or a pencil – with one obvious difference that the document image itself remains unchanged.

The Internet functions let multiple SMART-GS users work on the same document simultaneously, thus allowing them to participate in joint deciphering of digitalized manuscripts online. More notably, the application's built-in digital image search engine helps to compare unreadable handwritten elements to other characters that share a high level of similarity, extracted from the entire image data of a document. The accuracy of such search results, although not reaching 100% as in case of text data, is high, and allows to think about SMART-GS as an effective instrument to analyze difficult-to-read manuscripts, and an excellent multifunctional academic tool.⁴⁾

Thanks to this new application, the process of deciphering the Kuratomi's handwriting was faster, while the team's workload decreased, and storage or exchange of the results became easier. Proving its usefulness even with the massive text of the Kuratomi diaries, SMART-GS appeared as a full-fledged research supporting tool. Nowadays, in the computer age, when many historical sources are distributed in digital form, and panels of scholars work on a single project remotely via the Internet, there is a need for software suitable for such research model. SMART-GS perfectly meets this requirement.

One of the purposes of this article is to show how SMART-GS has been used in practice in preparing the Kuratomi diaries for publication. It also aims to promote this powerful tool and show its usefulness to those planning to use SMART-GS in their work on translating old documents or historical research, and those still unfamiliar with this application.

⁴⁾ For further details on SMART-GS, see: Hayashi Susumu, Nagai Kazu, and Miyazaki Izumi "Bunken Kenkyū to Jōhō Gijutsu – Shigaku-Kotengaku no Genjō kara." *Jinkō Chinō Gakkaishi* Jan. 2010: 24-31. Print, and the SMART-GS development website: <http://sourceforge.jp/projects/smart-gs/wiki/SMART-GS%E3%81%A8%E3%81%AF%3F>.

1. About Kuratomi Yūzaburō

Kuratomi Yūzaburō was born on 20 August 1953 in a village of Tokudō, Takeno District, Chikugo Province, in the feudal Kurume Domain (present-day Akinari, Tanushimaru Township, Kurume City, Fukuoka Prefecture). The Kuratomi family traced its roots to the Sengoku warlords of Ryūzōji clan from Hizen, Saga, and spread across the middle Chikugo River basin, setting up numerous branches. Yūzaburō's family, the Kuratomis of Tokudō, were one of those branches, and for generations served as village headmen.

Yūzaburō's father Taneatsu hailed from the Sonoda family of village headmen from Ōkuma, Mizuma District, Chikugo Province. He studied the Chinese classics in the Kangien Academy of Hirose Tansō in Hita, Oita Prefecture. At the age of 18, he married Kuniko of the Kuratomis of Tokudō, and was adopted into the family, taking up the position as its head. Kuniko was later to become Yūzaburō's mother. In the early Meiji years, Taneatsu became a samurai retainer of the Kurume Domain, and was promoted to a teacher at the domain's han school - Meizendō. In 1879, he became a Fukuoka Prefectural Assembly member. He died in 1890. Yūzaburō's elder brother Kōjirō was one of the founders of Fukuoka Nichinichi Newspaper Company.

In 1882, Yūzaburō married Nobuko, the eldest daughter of Hirotsu Hironobu, distantly related to the Kuratomi family, a diplomat responsible for shaping Japan's policy toward Korea at the beginning of the Meiji era. Nobuko's elder brother Naoto, more known under the name of Hirotsu Ryūrō, was a writer famous for his novel *Imado Shinjū* (*Suicide at Imado*).

Yūzaburō left for Tokyo in 1873. In September 1877, he enrolled in an intensive course at the Ministry of Justice Law School. It was the institution officially affiliated to the Ministry, centered on teaching Western law to future judicial officers. It offered 8-year-long regular courses (since 1872) and 2-year-long intensive courses (since 1876). Among first 39 students of the intensive course, Kuratomi graduated at the top of the class.

1-1. Judicial Bureaucrat and Officer

After graduation, instead of a career as a lawyer, Kuratomi chose joining the Ministry of Justice, and took a job in judicial administration. In 1887, he was promoted to a rank of counselor, and transferred to the Ministry's Criminal Affairs Bureau. When the Ōtsu incident (an assassination attempt on Prince Nicholas, Tsarevich of Russia during his visit to Japan, performed by a police officer Tsuda Sanzō) occurred in 1891, Kuratomi was sent to Ōtsu in lieu of the Bureau's director to handle the investigation.

A year after the incident, Yamagata Aritomo became Minister of Justice, his protégé Kiyoura Keigo was nominated Vice Minister, and Kiyoura's close ally Yokota Kuniomi went on to serve as Director of the Criminal Affairs Bureau. When in 1896 Kiyoura took over the Ministry, Yokota joined him as Vice Minister, and carried out a large-scale purge among judges and prosecutors nominated during the early Meiji years. It was a period when an informal Kiyoura-Yokota order was established within the Ministry of Justice, a process supported by young judicial officers educated in Western law at the Ministry of Justice Law School or the Law Faculty of Tokyo University. Kuratomi, whose abilities were recognized by Kiyoura and Yokota, was a beneficiary of this process. He was steadily promoted, and in 1898 became Director of the Civil-Criminal Affairs Bureau. As one of a Kiyoura-Yokota group, in a broader sense Kuratomi should be also viewed as a member of the Yamagata faction.

During his years as counselor, Kuratomi wrote 2 theses on criminal law and procedure. In 1892, he joined the Criminal Law Revision Committee, established within the Ministry, and took part in a revision of the Old Criminal Law of 1882, which was based on a French model. The work was supervised by Yokota Kuniomi, who had just returned from his studies in Germany. As a result, a completely new project, strongly influenced by German law, was drafted. Kuratomi, due to his cooperation with Yokota, played a vital part in the drafting process.

After 4 years as Director of the Civil-Criminal Affairs Bureau, he left the Ministry of Justice to become a prosecutor. He served as Deputy Chief Prosecutor of the Supreme Court of Judicature, Chief Prosecutor at the Osaka Court of Appeal and, since 1904, as Chief Prosecutor at the Tokyo Court of Appeal. He was considered a serious candidate for the next Public Prosecutor

General. However, when the post was vacant in 1906 after Yokota Kuniomi's nomination as Chief Justice of the Supreme Court of Judicature, Kuratomi failed to become his successor.

The reason of this upset lies in a trial that followed the Hibiya incendiary incident. During the incident, martial law was proclaimed in Tokyo, and Kuratomi, as the Chief Prosecutor at the Tokyo Court of Appeal, was in charge for prosecution procedures related to the riots. At first, he was reluctant to press charges against activists who had called for a rally against the Treaty of Portsmouth at Hibiya Park, including Kōno Hironaka. Nonetheless, by order of the Martial Law Commander, the Prosecution eventually accused them of instigating riots. Despite that, they were acquitted in the first instance by the Tokyo District Court due to lack of evidence, and since the Prosecution decided not to appeal the verdict, it became final. An important factor behind the Prosecution's decision was the establishment of the Saionji Kinmochi Cabinet. Prosecutor General Yokota together with the new Minister of Justice Matsuda Masahisa suppressed Kuratomi's request to file an appeal.

After the verdict, newspapers and legal journalists launched a campaign for Kuratomi's resignation, and were soon joined in protest by bar associations. Kuratomi refused to resign, but the protest buried his opportunity to become Yokota's successor.

1-2. Judicial Career in Korea

In June 1907, the Japan-Korea Treaty of 1907 with an attached secret memorandum was signed between both countries. The Korean government agreed to keep its judicial affairs distant from ordinary administrative affairs, establish the new Supreme Court, as well as courts of lower rank and prisons, and employ Japanese judges, prosecutors, secretaries, prison governors, and wardens. Based on this, Kuratomi headed to Korea, where he was appointed Vice Minister of Justice in the Korean central government.

Thanks to the Treaty, Japanese Resident-General Itō Hirobumi brought the internal government of Korea under the jurisdiction of Japan. In order to retain Japanese control, he moved forward with a plan to modernize the Korean legal system, the idea he made a basic principle of his Korean policy. Kuratomi, newly

assigned to his post, actively supported Itō in a practical implementation of this policy, and was engaged to prepare legal and administrative bases for establishing new courts and law adjustments, beginning with the Penal Code.

After reforming Korean judicial system for 2 years as the Vice Minister of Justice in the Korean Government, in October 1909 Kuratomi was appointed Director of the Agency of Justice under the Resident-General. The appointment was a result of the *Memorandum Concerning Cession of Judicial and Policing Powers in Korea*, signed in July 1909, according to which judicial power in Korea was ceded to Japan, and court jurisdictions concerning both Koreans, and Japanese residing in Korea, were transferred to newly established courts under the Japanese Resident-General. The Ministry of Justice was abolished, with the Agency of Justice assuming its powers. Since the post of his counterpart in the Korean government ceased to exist, Kuratomi became a *de facto* Korean minister of justice.

When Japan annexed Korea in August 1910, the office of Resident-General was replaced by that of Governor-General, which subsequently made Kuratomi the Secretary of Justice of the Government-General in Korea. Nonetheless, his scope of responsibilities remained nearly unchanged since the previous year's reappointment.

Undoubtedly, the years spent in Korea marked the culmination of Kuratomi's career as judicial officer. He was the one responsible for establishing a modern judicial system as a minister of justice in the country, call it a protectorate or colony, with the population exceeding 10 million people.

It is worth mentioning that words, 'Prince Itō was against an annexation,' found here and there throughout the Kuratomi diaries, are one of the main arguments supporting the theory that Itō Hirobumi opposed plans for annexation of Korea.

1-3. Director-General of the Cabinet Legislation Bureau

Soon after the 3rd Katsura Cabinet was formed, the new Prime Minister Katsura Tarō sounded out Governor-General Terauchi Masatake about the possibility to transfer Kuratomi to the central government as Director-General of the Legislation Bureau. After careful consideration, Kuratomi decided to

reject the offer. However, when the Katsura Cabinet was swept by the 'Movement to Protect Constitutional Government,' his successor, Yamamoto Gonnohyōe, came up with the same proposal, which this time was accepted by Kuratomi. Yamamoto planned to reform the government system in Korea, and needed an expert on the Korean legal system, who could stand up to Governor-General Terauchi. Kuratomi seemed a perfect candidate. It is worth noting that he accepted Yamamoto's offer, although he was aware of Terauchi's disapproval of the Yamamoto's reform plan.

The Yamamoto's intention was to largely constrict powers of the Governor-General, to the extent General Terauchi was afraid he would be forced to resign. The whole picture of the plan has been described in one of the documents preserved in 'Papers of Kuratomi Yūzaburō.' Kuratomi's task was to examine objectives of the reform, and also draft a new imperial edict that would replace the one issued during the annexation. After 3 years of work under Terauchi on the legal system of colonial Korea's military government, Kuratomi took part in creating a reform that would curtail the military rule. However, the Yamamoto Cabinet was soon brought down as an aftermath of the Siemens scandal of 1914, which definitely put a halt to the reform process. Kuratomi also resigned his post, and was appointed a member of the House of Peers by Imperial command.

1-4. Bureaucrat in the Imperial Household Ministry

Kuratomi entered the Imperial Household Ministry as Director of the Imperial Accounting Bureau, and remained in post until the end of 1925. He worked under 4 consecutive ministers, Hatano Yoshinao, Nakamura Yūjirō, Makino Nobuaki, and Ichiki Kitokurō. The Imperial Accounting Bureau was a department responsible for examining accounts of the Imperial Family, but Kuratomi's responsibilities exceeded those of a mere auditor. With his rich experience as a judicial officer, he was employed in many different capacities, and attended numerous important affairs at the Ministry. That makes the Kuratomi diaries the excellent source of information about the state of affairs in the Imperial Household Ministry in 1920s.

Kuratomi was persuaded to join the Ministry by Hatano Yoshinao. Hatano was a former judicial bureaucrat, the Vice Minister of Justice during Kuratomi's years as Director of the Civil Affairs Bureau, and later the head of the Ministry when Kuratomi served as Chief Prosecutor at the Tokyo Court of Appeal, and the two shared a long friendship. In 1911, Hatano was appointed the Lord Steward to the Imperial Prince. Being in the service of Crown Prince Yoshihito, and his wife Princess Sadako, he earned their deep trust. When in 1914, during the first term of Yamamoto administration, the Imperial Household Ministry was shaken by a bribery scandal, related to land purchase from Nishi Honganji Temple to erect a new imperial villa, the incumbent Minister Watanabe Chiaki was forced to resign, and Hatano was in haste nominated as his successor.

With the former head of the Ministry involved in corruption, Hatano decided to fill with experts from outside the Ministry positions of Head of the Bureau of Palace Storehouses, and Director of the Imperial Accounting Bureau, both responsible for the control of the Imperial Family's expenditures. The first post was accepted by Yamazaki Shioroku from the Ministry of Finance, the latter by a former Public Prosecutor General and Minister of Justice under the 3rd Katsura administration, Matsumuro Itasu. Matsumuro later joined the Terauchi Cabinet as Minister of Justice, thus leaving the position to his friend and fellow lawyer, Kuratomi.

Imperial Institution Council (1916-26)

Soon after he entered the Imperial Household Ministry, Kuratomi was assigned to the newly inaugurated Imperial Institution Council as its member. The Council was an institution established within the Court to enact new legislation concerning the Imperial Family. As many of its members, including Chairman Itō Miyoji, were unrelated to the Imperial Household Ministry, Kuratomi, a holder of the Juris Doctor degree, became a spokesman for the Ministry within the Council.

Kuratomi had differences of opinion with other council members including Itō, Hiranuma Kiichirō, and Okano Keijirō, regarding several problems, the question of establishment of the Korean Royal Family Law being the most significant. The 'royal family' refers to members of the House of Yi who, in

exchange for transfer of sovereignty over Korea to Emperor Meiji during the Japanese annexation, were promised honorable treatment equal to Japanese royals, and given titles of Yi Wang (Crown Prince), Yi Taewang (King Emeritus), and Yi Gong (Prince), respectively. The Korean Royal Family Law was an act regulating their rights and duties the way the Imperial Household Law did with the Imperial Family, and the Civil Code - with subjects of the State.

The majority of the Council, including Itō, Okano, and Hiranuma, was of the view that the legal status of Korean royal family had already been defined by an Imperial edict issued at the time of the annexation, stating their status was ‘not royal, but comparable to that of royalty,’ i.e. situating them above the aristocracy and commoners. As such, it allowed regulations from the Imperial Household Law to be applied also to the House of Yi, with one notable exception of those regarding inheriting the throne. Therefore, the Korean Royal Family Law, as their family constitution’s equivalent, should be issued in a form of Imperial Household order, basing on ‘rules concerning status, rights, and responsibilities of the royalty’ in Japan.

Nonetheless, Kuratomi strongly opposed the above interpretation. He insisted it was unreasonable to assume the Yi family’s status within the national law had been settled by an Imperial edict, as there was no legal basis for making them subject to the Imperial Household Law. Consequently, however high their status might be, by law the members of the House of Yi were Imperial subjects, and as such, according to the spirit of the Meiji Constitution, had their rights and duties regulated by the Civil Code. However, Kuratomi’s view on the matter was shared only by the minority of the Council, and thus was rejected.

The Korean Royal Family Law project drafted by the Imperial Institution Council was sent for consultation to the Privy Council, but had to be withdrawn due to the Council’s fierce opposition. The given reason was basically the same as the reason Kuratomi had given earlier – since the House of Yi was not royalty, according to the national law they were Imperial subjects, so the Korean Royal Family Law, rather than as an Imperial Household order, should be issued as a legal act approved by the Imperial Diet, followed by detailed regulations set by the Government-General in Korea. The Privy Council’s objections brought enactment of the law to a halt, and the Imperial Institution Council’s work suffered a setback right after it had been inaugurated.

The above problem was closely related to a problem of marriage between Crown Prince Yi Eun and Princess Nashimoto Masako, promoted by Prime Minister Terauchi in order to strengthen Japanese rule in Korea. According to the Imperial Household Law, marriages of royalty were allowed only within the royalty, or with aristocrats after obtaining the Emperor's permission. Yi Eun was denied royal status, yet asking for the Emperor's permission as an aristocrat would be in contradiction to the statement of the Imperial edict, promising the Yi family 'honorable treatment equal to royals.' That left him being neither royal nor aristocrat, with no legal option to proceed with the marriage.

The majority of Imperial Institution Council saw the House of Yi's status as 'comparable to that of royalty,' and claimed the marriage would be in accord with the law. Kuratomi and The Privy Council insisted otherwise. Their solution to make the marriage possible was to revise the Imperial Household Law in a way that would allow members of the House of Yi to intermarry with the Japanese royalty. Since the marriage had already been accepted by the Emperor, the Privy Council requested the Imperial Household Ministry to prepare such revision. The task was entrusted to Kuratomi.

After some amendments, Kuratomi's draft of the revised Imperial Household Law was approved by the Privy Council, and became law in 1918. In the fallout, Itō, Hiranuma, and Okano, who were against such a solution, tendered their resignations as chairman and members of the Council respectively. This became a serious political issue, and Minister Hatano intervened, desperately persuading them to withdraw their resignations. Eventually, Itō and the others remained in office, but due to this incident, the Council's actions to enact new legislation regarding the Imperial Family were considerably delayed.

Yet, ratifying of the Korean Royal Family Law had been shelved indefinitely until Ichiki Kitokurō was appointed Imperial Household Minister. Ichiki, who shared the Privy Council's opinion on the problem, managed to reach a compromise with Itō and the Imperial Institution Council. His idea was to pass through the Diet a law that left affairs regarding the House of Yi to be regulated by Imperial Household orders, which allowed the Korean Royal Family Law to be issued in this form. Kuratomi fought this plan with all his energy, but was overpowered, when it was consecutively accepted by the Imperial Institution

Council, the Imperial Household Ministry, the Privy Council, and the Cabinet. The Korean Royal Family Law was issued in 1926, already after Kuratomi's nomination as President of the Privy Council.

Another problem that led to serious antagonism between Kuratomi and the majority of the Council, was enactment of the 'Enforcement Regulations regarding the Imperial Family Members' Demotion from Nobility to Subject.' The above title refers to enforcement regulations to Article 1 of a 1907 amendment of the Imperial Household Law, which allowed demotion from nobility to subject in the *ōke* branches of Imperial Family. The regulations made it obligatory to deprive members of the *ōke* branches of their royal status, with the exception of firstborn sons. Kuratomi was ordered by Hatano to draft a project of such regulations, which he prepared in cooperation with the Council's majority faction, centered around Itō, Okano, and Hiranuma, and sent to the Privy Council for consultation. The majority faction wanted to completely phase out the existing *ōke* branches within a few generations, but Kuratomi, fearing their reaction, called for maintaining the status quo. However, as Minister Hatano supported the majority's view on this issue, Kuratomi was forced to withdraw his objections.

Soon, Kuratomi's fears proved to be justified. The regulations caused an outbreak of anger among some Imperial Family members, leading to their rejection by the Imperial Family Council. After Emperor Taishō validated the regulations with his approval, the Imperial Household Ministry and the Imperial Institution Council drafted the appropriate law, which was later endorsed by the Privy Council. However, when the Emperor referred the draft to the Imperial Household Council, it was rejected. This unprecedented incident undermined the authority of the Emperor, the Imperial Household Ministry, and the Privy Council. *Genrō* Yamagata Aritomo demanded that Hatano take responsibility for this failure, which forced him to resign as minister.

Peerage Bureau (1920~1926)

When at the end of 1920 Inoue Katsunosuke, Director-General of the Peerage Bureau, left his office temporarily vacant due to prolonged illness, Kuratomi acted as his proxy, and served this post until Inoue's recovery in April 1921. The

Peerage Bureau was a division within the Imperial Household Ministry, responsible for administrative affairs related to the Imperial and aristocratic families. Kuratomi, acting as its director-general, was one of merely a few people of the Ministry involved in the so-called 'grave incident at the Imperial Court' (In the Imperial Household Ministry, only the Minister, the Vice-Minister, and a few high-ranked bureaucrats from the Peerage Bureau were engaged to deal with this matter). The Kuratomi diaries give a detailed description on the Ministry's reaction to the situation, revealing numerous, previously unknown facts about the incident. The 'grave incident in the Imperial Palace' was a series of events at the Imperial Court, triggered by the engagement of Crown Prince Hirohito and Kuni Nagako. *Genrō* Yamagata Aritomo involved the Imperial Household Ministry to cancel the engagement, and demanded that Nagako's father, Prince Kuni Kuniyoshi, revoke the betrothal. Prince Kuni, however, not only refused those demands, but also mobilized his various allies to successfully withstand Yamagata's attacks. The incident brought a resignation of the responsible Imperial Household Minister Nakamura Yūjirō, and a *de facto* diminishment of Yamagata's power.

The reason Yamagata and the Ministry demanded the annulment of engagement was hereditary color blindness that existed in Nagako's mother's line, the Shimazu family, and a fear that the future Emperor's sons would inherit this impairment. This attitude was driven by a 'doctrine of pure blood,' which came from fear to impair the holy Imperial blood. As a matter of course, Kuratomi, too, was one of the supporters of this viewpoint, and an advocate for engagement cancellation. In contrast to the above was a 'doctrine of morality,' backing up Prince Kuni's claim, and deeming a withdrawal from a given promise due to such an insignificant flaw as unethical, and inappropriate for the Imperial family, which had an obligation to serve as a moral authority in the Japanese society.

As the conflict between canceling and proceeding with the wedding plans turned into an ideological clash of the doctrines, what initially was a problem of how to manage the Imperial Household, evolved into a clash between two basic principles, the 'maintanance of the divinity of the Imperial line' against the 'cultivating the monarch's virtue' or, in other words, into a tug-of-war over the axiology of the Imperial rule. The above principles were two pillars that justified

the existence of the Emperor System. As they were thought to complement each other, no attention was paid to their conflictual relations, which were brought to light only when the problem of possible hereditary sight condition occurred. Advocates of both doctrines could find no constructive way to persuade the other party, and the discussion consistently moved along two parallel lines, eventually leading to a deadlock.

What propelled the situation that far was a force of ‘movements.’ When a slightly different point of confrontation was introduced to the conflict around the principles regarding the Imperial line, the problem of engagement cancellation turned political, and the situation quickly became dynamic. This new confrontation line stood between the voices for engagement cancellation, described as ‘tyrannical methods of *genrō* Yamagata, a *de facto* controller of the Imperial Household Ministry, and his clique,’ and attempts to stop the cancellation by ‘anti-clique (anti-Yamagata)’ groups. The latter standpoint attracted attention of various elements, but what all of a sudden brought these ‘movements’ to attention was an anonymous document titled *The Lawless Tyranny of the Imperial Household Ministry*. The document was sent to every newspaper company, posing a danger that the conflict, so far hidden from the public eye, would be exposed and cause a scandal involving the Imperial Family. The Kuratomi diaries identified the document’s author as a Kuruhara Keisuke, who wrote it after a promise of a substantial sum of money from Prince Kuni’s allies. The diaries also reveal that Kuruhara threatened the Prince Kuni faction after they failed to fulfill their promise.

Eventually, the Ministry of Home Affairs and the Cabinet had no other way to put the situation in order, but to speak up against the engagement cancellation. That left the *genrō* and the Imperial Household Ministry in a tough position. To find a way out of the difficulty, Minister Nakamura came up with a plan to consult the problem with the Privy Council, but he finally abandoned this idea. As the situation called for stronger measures, he made a declaration about withdrawal from the cancellation plan, and tendered his resignation. The reasons of Nakamura’s weakening of attitude were a few, but two were particularly important. One was a warning from Speaker of the House of Representatives Okushibe Saburō that the House, whose majority was against the cancellation, would inevitably speak publicly on the matter. The other one

was resistance of Kiyoura Keigo, the Vice-President of the Privy Council and Hirata Tōsuke, a general affairs official of the Imperial Household Ministry, both Yamagata's protégés and prominent figures within his faction, against any possible involvement of the Council into the problem.

The 'grave incident at the Imperial Court' ended with the defeat of Yamagata, Nakamura, and the others supporting the marriage cancellation. In such course of action, one would expect the issue to settle down. However, this was not the case.

Makino Nobuaki, who became Nakamura's successor as Imperial Household Minister by recommendation of *genrō* Matsukata Masayoshi, was himself an advocate for the engagement, and hoped that after Nakamura's objection were withdrawn and the turmoil caused by the incident began to calm, there would be no obstacles to proceed with the marriage. Soon, he had to deal with opposition from Empress Teimei, who in the face Emperor Taishō's serious ailment, acted as head of the Imperial Household, and who was inclined against the betrothal. The Empress felt distrust towards Prince Kuni's behavior during the incident, and even after Nakamura's resignation she believed there still was a possibility to annul the engagement. She refused Kuni's requests to grant an audience to Nagako and constantly avoided her. Makino needed to persuade the Empress to accept the Crown Prince's marriage plans, but it required time.

One of the opportunities to break the impasse was establishing a regency. After becoming a regent, the Crown Prince would have power to issue an Imperial sanction to resolve the problem of his engagement by himself, and proceed with the wedding if that was his wish. Makino was given an advice from Prime Minister Hara Takashi to settle 'the problem of regency first, and the issue of Imperial wedding only later,' and he followed this suggestion. While working on the establishment of the regency, he managed to win the Empress's trust, and subsequently persuaded her to accept Nagako as the Crown Prince's wife.

The course of the 'grave incident at the Imperial Court' suggests that Emperor Taishō either lacked the mental capacity and judging abilities to express his own will, or assuming he could make informed decisions, had no influential power to have them carried out. This state of affairs became the main factor that led to complication and politicization of the engagement issue, and drove *genrō*

Yamagata Aritomo and the Imperial Household Ministry to defeat. The imbroglio about the engagement made it evident that the Emperor had lost all his powers to actively make decisions and judgments, which gave way to the establishment of the regency.

Between October 1921 and June 1922, Kuratomi served as Interim Director-General of the Peerage Bureau. When in June 1922, Marquess Tokugawa Yorimichi was appointed a new Director-General, he was assigned to aid him as a general affairs official by Minister Hatano. This relation continued until Kuratomi was nominated president of the Privy Council. Meanwhile, as a staff member in the Peerage Bureau, he dealt with numerous affairs related to the Imperial and aristocratic families, among which the most famous were the Yanagihara Byakuren incident (Yanagihara Akiko, also known under her pen name Byakuren, was a niece of Emperor Taisho's mother, Yanagihara Aiko, who left her husband, Itō Den'emon, a wealthy businessman from Kyushu, and eloped with a lover, Miyazaki Ryūsuke. The right wing demanded from the Imperial Household Ministry to take action against Akiko and her brother, Count Yanagihara Yoshimitsu, on account of disgracing the Imperial family. At the same time, Itō filed a lawsuit to reject paternity of a child born between Akiko and Miyazaki. Kuratomi claimed that, since Itō made no formal accusation of adultery against his wife and her lover, the Ministry had no power to take any action against Akiko, who had already left the Imperial Family to marry a commoner), the death of Prince Kitashirakawa Naruhisa (During his stay in Paris, Prince Kitashirakawa Naruhisa died in a car accident caused by himself, that also injured Princess Kitashirakawa, and Naruhisa's cousin Prince Asaka Yasuhiko), and the Prince Kuni Asakira's engagement cancellation incident (Crown Princess Sadako's elder brother, Prince Kuni Asakira, was engaged to Count Sakai Tadamasa's younger sister Kikuko. The engagement had already been approved by Emperor Taishō, but after his sister got married to the Crown Prince, Asakira, displeased with his fiancée, expressed a will to cancel the arrangements, and he obtained his father Kunihisa's support. Prince Kuni, who had firmly opposed attempts to annul his daughter's engagement citing the 'doctrine of morality,' now attempted to prevent his son's marriage with no serious reason. Minister Makino intended to protest, but meanwhile Tokugawa's behind-the-scene negotiations persuaded the Sakai family to

withdraw, thus settling the conflict. Nonetheless, Crown Prince Hirohito, now ruling as Prince Regent, instead of authorizing the cancellation, in harsh words scolded Asakira's behavior. Kuratomi, serving as Tokugawa's advisor, described in his diaries the particulars of this incident).

Reforms of the Imperial Household Ministry and Establishment of Regency (1921)

The high-rank bureaucrats of the Ministry directly involved in the 'g incident at the Imperial Court,' all of them supporters of the engagement cancellation, followed Minister Nakamura and handed in their resignations. Kuratomi was not an exception. Nakamura's successor Makino, in order to avoid chaos in the Ministry, turned all the resignations down, but installed his own trusted man, Sekiya Teizaburō from the Ministry of Home Affairs, as Vice-Minister. It should be noted that when Makino requested Kuratomi to stay in office, he explained him that he counted on his cooperation, especially when the Ministry, affected by staff shortages, was facing the upcoming regency problem. Kuratomi's participation in Makino's two most important tasks, the regency establishment and the Imperial wedding, shows how the new Minister valued his legal expertise and experience. Kuratomi decided to continue work under Makino, and was deeply involved in preparing ground for the regency.

Around the same time, Makino engaged himself into structural reforms in the Ministry to amend the Imperial Family's financial affairs, impaired during the post-World War I depression, and improve public's perception of the institution. To achieve this goal, in April 1921 he formed a secret committee composed of himself, Vice-Minister Sekiya, Head of the Bureau of Skilled Artisans Ohara Senkichi, Counselor for the Imperial Household Ministry Nambu Mitsuomi, Head of the Bureau of Palace Storehouses Yamazaki Shioroku, and Kuratomi. The above 6 members, who worked on the reform plan finally introduced in October of the same year, constituted a core of so-called Makino order, newly established within the Ministry. A surprising first draft prepared by Nambu, Ohara, and Kuratomi, suggested far-reaching changes, including discontinuance of certain divisions (the Counselor Office, the Bureau of Court Physicians, the Bureau of the Palace Table, the Bureau of Hunting, the Bureau

of Palace Equipment, the Bureau of the Imperial Stables, the Bureau of Furniture, the Imperial Museum, etc), and councils (the Imperial Institution Council, The Gakushūin Council, the Imperial Household Economy Council, the Peerage Bureau Council, etc). If put into effect, it would have fairly reduced the Ministry's structures. However, the changes contained in the final draft were largely reduced. That led to growing distrust within the committee. During the planning process and introducing of the reform, cracks appeared between Makino, Sekiya, and Yamazaki, advocating moderate changes, and Ohara and Nambu, calling for more radical measures. This cracks became more evident in October, when changes in staff were made within the Ministry together with introducing the reform. By the first half of 1923, the split developed into a deep conflict between two factions in the Ministry, Makino with Sekiya on one side, and Ohara with Vice-Director of Ceremonial Saionji Hachirō on the other. As a result of this conflict, Kuratomi developed his strong anti-Makino stance.

In June 1921, Makino covertly ordered Kuratomi to examine procedures for establishing regency. At this moment, an agreement regarding the plan had already been settled between *genrō* Yamagata Aritomo, Prime Minister Hara Takashi, and Makino, thus opening the way for concrete research of appropriate legal procedures, a task Kuratomi became assigned to. From this moment, he was a *de facto* person in charge of the regency problem, making preparations under Makino's special orders until November, when the Crown Prince was finally named Prince Regent. The Kuratomi diaries reveal details regarding this process. It was the first regency after promulgation of the Meiji Constitution and the Imperial Family Law, and as an unprecedented case, it required particularly careful steps to avoid any possible protests. According to the diaries, it was mostly Nambu who worked intensively on solving potential problems. The Kuratomi diaries also give concise descriptions of meetings of the Privy Council and the Imperial Household Council when the establishment of the regency was approved.

Director of Royal Affairs (1 9 1 6 – 2 0) and Household Counselor of the Higashikuni Family (1 9 2 3 – 2 7)

As it was stated earlier, Kuratomi held several additional positions in the Ministry, the Director of Royal Affairs of the Higashikuni family being one of them. A ‘director of royal affairs’ was a function of a ministerial officer attached to all imperial family branches below the shinnōke, to provide advice and supervise members of staff attached to the house (in case of the shinnōke branches, its equivalent was a ‘steward’).

The head of the Higashikuni family that Kuratomi had been assigned to, was Prince Naruhiko, the ninth son of Prince Kuni Asahiko, born in 1887. In 1906, he was granted by the Emperor the title of Higashikuni and permission to start a new branch of the Imperial Family. In 1915, he married the ninth daughter of Emperor Meiji, Princess Toshiko. Kanai Shirō, a secretary responsible for handling the household affairs, reported, or sought Kuratomi’s advice even in trivial matters. As a consequence, the Kuratomi diaries unintentionally became also a valuable source depicting domestic circumstances of the Higashikuni family.

Prince Naruhiko left Japan in 1920 to study in France. Unconstrained life in Paris, completely different from the one he had to live in Japan as a royal, absorbed him to the extent that he refused to return, and each year extended his stay in France by another 12 months. Even the death of his child in the Great Kantō Earthquake was not a reason for him to leave Paris. The Imperial Household Ministry in numerous ways advised him to come back home voluntarily, but the Prince consistently rejected these demands, and eventually requested to be demoted from nobility to subject.

Prince Naruhiko’s refusal to return to Japan, became the most vivid case of insubordination of an Imperial family member towards the Emperor and the Imperial Household Ministry during the Taishō era, and the one that gave a serious headache to Makino and his successor, Ichiki. Kuratomi was released from his obligations to the Higashikuni family and replaced by Muraki Masami, when he became an advisor to the House of Yi. However, he was reinstated by Makino to serve as a household counselor (a *de facto* acting Director of Royal Affairs) after the death of Muraki at the end of 1922 (Kuratomi retained this post, as well as the post at the House of Yi, also when he left the Imperial

Household Ministry to become President of the Privy Council. The service for the Higashikuni family was terminated with Prince Naruhiko's return to Japan).

The diaries provide a lot of detailed information about how the Imperial Household Ministry dealt with this problem. When Prince Naruhiko was informed about Emperor Taishō's failing health, after some hesitation he finally decided to return, but reached Tokyo already after the Emperor's death. This late arrival enraged some members of the Imperial Family, as well as the Imperial Household Ministry, who called for Prince Naruhiko's punishment by stripping him of his nobility. Kuratomi, however, rejected these demands and allowed the Prince to keep his social status, but instead advised him to take up service for the country and the Throne.

Chairman of the the Korean Royal Family Council

After Crown Prince Yi Eun married Princess Nashimoto Masako and set up a family, Minister Hatano gave Kuratomi a special mission to serve the Yi family as an advisor. This mission continued even when he was appointed as Vice-President, and later as President of the Privy Council. When the Korean Royal Family Law was introduced in 1926, it established the Korean Royal Family Council, whose aim was to discuss all the important matters related to the House of Yi. Kuratomi became the first Chairman of the Council, and remained in the post until the end of his presidency in the Privy Council.

According to the order Hatano gave Kuratomi, his main task was to 'guide the Prince in order to develop noble character of his royalty,' rather than engage into so called 'royal,' or family affairs. However, providing guidance to the Prince often implied Kuratomi's involvement also into the 'royal affairs,' so the diaries contain some entries related to the Prince's household management (It should be noted, however, that Kuratomi acted as an advisor, thus was not directly connected to the Office of Yi Royal Family).

The aforementioned 'guidance' was not limited only to occasional meetings, reading Chinese classics, and discussions about Prince Yi's attitude as a member of the royalty. Kuratomi's involvement was more diverse. The example below illustrates its complex nature.

Yi's father, former Korean emperor Gojong died on 21 January 1919, which forced Yi Eun to postpone his wedding. The Imperial Household Ministry, according to Japanese tradition, set the period of mourning for 1 year, and the Prince's wedding eventually took place next year, in April 1920. In spite of that, Yi Eun's elder brother, residing in Keijō (present-day Seoul) ex-emperor Sunjong, although outwardly accepted Japanese decision, followed Korean customs and arbitrarily extended his mourning period to 3 years, which was accepted by the Japanese Government-General. Kuratomi could not leave the matter as it was, and met with Vice-Governor of Korea Mizuno Rentarō in person, asking him to take appropriate steps. The problem was important, since Yi Eun's perception among the Koreans was at stake. He was seen as the one who had forgotten his ancestry and assimilated into the Japanese culture. A difference in the length of mourning between him and his brother would make this impression even worse, and be seen as disobedience to his late father, which would consequently tarnish his reputation.

The above example shows the delicate nature of Kuratomi's 'guidance.' His main task was to nurture in the Prince loyalty towards Japan, since that was a sort of 'virtue' the Japanese expected from the Korean Royal Family. However, if Yi Eun had submitted to these demands completely, he would be mocked by Koreans as a 'Japanese,' and if the House of Yi had lost their ethnic roots, their 'virtue' might have become an object of doubt. The goal of Kuratomi's 'guidance' was to find a compromise solution on how to make Yi Eun loyal to Japan, and respected by Koreans at the same time.

In this context, the fragments of Kuratomi diaries related to the Yi family are a reliable source exposing details on the Japanese rule in Korea, seen through a prism of the former Korean Imperial Family, and the way they were treated by the Japanese authorities.

Conflict with Makino Nobuaki

Although torn by internal conflicts prompted by the engagement cancellation problem, from the outside the Imperial Household Ministry under the Makino order looked like a well-oiled machine, consistently solving the difficult issues it had to face, including the structural reform, the establishment of the regency,

and the Crown Prince's betrothal. However, at the same time below the surface the rivalry between two factions severely escalated. At the center of the conflict were Ohara Senkichi, one of the 'old guard' in the Ministry, capable yet having many enemies, and Sekiya Teizaburō, a newcomer and Makino's trusted man. Many of the 'old guard,' including Yamazaki Shioroku, Director of Ceremonial Inoue Katsunosuke, Head of the Bureau of the Imperial Stables Itō Hirokuni, and Head of the Bureau of Royal Tombs Sengoku Masataka, supported Sekiya, but some, like Nambu Mitsuomi or Saionji Hachirō, remained on Ohara's side.

Kuratomi from the beginning sympathized with Ohara, and when he became aware how Sekiya had plotted against Nambu to make him resign from his post, he definitely backed the anti-Sekiya faction. The feud between Ohara and Sekiya culminated in the first half of 1923. Around the same time, Kuratomi advised Makino to deal with ministerial affairs personally, instead of leaving them to the vice-minister, but Makino ignored this advice, deciding that he would engage only in the most important cases, leaving the rest to Sekiya. When Makino clearly expressed his support for his Vice-Minister, he also became a target of criticism from Ohara, Kuratomi, and the rest of anti-Sekiya faction. The conflict ended in 1924 with Makino and Sekiya's victory, when Ohara retired from office. In an act of resistance, Kuratomi attempted to expose a case of an Imperial estate in Shizuoka Prefecture put up for sale at a reduced price, claiming that during this operation Sekiya acted for the benefit of the prefecture where he was formerly posted, but due to Makino's intervention Kuratomi's attack ended in failure.

The clash of two cliques in the Imperial Household Ministry went beyond a mere factional conflict. It developed into a vehement discussion concerning the nature and method of the Imperial Household's management. Sekiya held an idea of a 'benevolent imperial family, revered and loved by their subjects,' and actively engaged members of the Imperial Household in charity and social activities, with Makino's full support. Ohara and Kuratomi agreed that after World War I some changes in the Ministry and at the Court were necessary, but protested when Sekiya's ideas began to take shape, fearing they would undermine the Imperial authority. The case of Imperial forests sold at a reduced price to Shizuoka Prefecture was a good example illustrating these different attitudes. Sekiya saw the sell of unprofitable lands as a chance to support the

prefecture, which could use them to stimulate local industry, but Kuratomi could notice only the financial loss of the Throne.

Unlike Ohara, Kuratomi was esteemed among his coworkers, and his opinions were highly valued. This let him retain his post, but nevertheless Kuratomi's distrust towards Makino and Sekiya remained deep.

Other Involvements

Kuratomi was involved in managing household affairs of the Imperial Family, the Higashikuni family, and the House of Yi, but also served as a household counselor for the Arima lords of the former Kurume Domain, including their family branches of viscounts and barons Arima. The Kuratomi diaries contain a bulk of details pertaining to the family's problems, including a conflict between Baron Arima Yoritsumu and his heir, Yoriyasu, about managing the household affairs, and antagonisms it sparked among the family's advisors and housekeeping staff, Yoriyasu's extramarital affair, and his social activities as a young aristocrat (especially in the Dōaikai Society), Yoriyasu's siblings' marital and professional matters, financial and business issues of the viscounts of Arima, etc. Kuratomi, as a household counselor, was involved in dealing with the above issues on numerous occasions.

Kuratomi was also a member of the Extraordinary Legislative Council, and became its Chancellor after Hozumi Nobushige's appointment as president of the Privy Council. Kuratomi wrote in the diaries about his involvement as a Council member in work on the Jury Act, the Penal Code revision, and the Election Law revision (the General Election Law). These writings are a decent source for knowing about operations of the Council.

1-5. The Privy Council

Since 1920, concurrently with the post of Director of the Imperial Accounting Bureau, Kuratomi served as Privy Councilor. Since the Privy Council advised the Throne also on the Imperial Family matters, cases of experienced high-rank bureaucrats from the Imperial Household Ministry joining the Council were not uncommon. In 1923, working for the Privy Council became his principal job, and

the focus of his duties began to shift from the Ministry to the Council. When in the end of 1925, after the sudden death of Okano Keijirō, Kuratomi was appointed Vice-President (under President Hozumi Nobushige), and in April 1926 promoted to President, his activities concentrated exclusively on the Privy Council.

After the Russo-Japanese war, the Privy Council turned into a stronghold of the Yamagata faction, but when its President Yamagata Aritomo died in February 1922, the Council's powers rapidly diminished. Former Vice-President Kiyoura Keigo was appointed Yamagata's successor, but the consecutive vice-presidents were chosen from judicial bureaucrats with no political background, or academics (Hamao Arata, Ichiki Kitokurō, Hozumi Nobushige, Okano Keijirō). When Kiyoura left the post to form a cabinet, Vice-President Hamao was appointed the new President, which set a pattern to be followed from then on. This should be seen as a result of a deliberate personnel policy carried out by *genrō* Saionji Kinmochi, discontent with the fact that the Privy Council constituted a counterweight to the government. From Saionji's point of view, figures like Kuratomi, with no political influences and ambitions, were the most suitable for the post.

However, contrary to Saionji's expectations, the Privy Council under Kuratomi's presidency continued its hard line against party politics. With Hiranuma Kiichirō as Vice President, and Futakami Jōji as Chief Secretary, he made the Council a center of resistance against the consecutive partisan cabinets, and the following Saitō Makoto administration. Headed by Kuratomi, the Privy Council forced the 1st Wakatsuki Reijirō Cabinet to resign, fiercely attacked the Tanaka Giichi Cabinet about controversies surrounding the ratification of the Kellogg–Briand Pact, and stood against the Hamaguchi Osachi Cabinet after the ratification of the London Naval Treaty.

In this period of his career, Kuratomi found himself an important player in Japanese politics. However, unlike Yamagata and Kiyoura, he had insufficient political power, the fact he was aware of, and consequently followed a policy of non-intervention. The exceptions were made for cases, when the Privy Council was consulted about political matters. These cases were opportunities to vehemently attack the government, and the allegedly apolitical stance of the Council's president usually changed when party politics was involved.

The Imperial Family matters were held at that time by Makino – then the Lord Keeper of the Privy Seal of Japan Makino, and Ichiki – the Imperial Household Minister. Naturally, Kuratomi spared them no words of criticism in the diaries. Antipartisan in its core, he also disapproved of the fact that Makino and Ichiki were party politics advocates at the Imperial Court. This shows that the friction between Kuratomi and Makino developed a dual character, the fact which is vital to apprehend the Privy Council's attitude of that period. For instance, when after the May 15 incident *genrō* Saionji Kinmochi asked for the Privy Council's opinion regarding candidates for a new prime minister, Kuratomi replied that a party cabinet would be unable to handle the situation, adding that one of the reasons of this disgraceful affair was Makino, who – according to Kuratomi's advice – should be instantly dismissed.

In May 1934, Kuratomi resigned from his post at the Privy Council and withdrew from the politics, giving his advanced age (81 years) as a reason (The true reason was handing the post over to Hiranuma, who had by far more political influence). After retirement, he returned to his home village of Akinari in Funagoshi, Ukiha District, where he lived in comfort until his death on 26 January 1948, at the age of 94.

2. About SMART-GS

2-1. What is SMART-GS

As has been stated earlier, SMART-GS, an ICT application currently under development by the Department of Humanistic Informatics, Graduate School of Letters, Kyoto University under the direction of Professor Hayashi Susumu, is a tool aimed to support philological and historical research, essential in this day and age when all historical documents are gradually converted into digital images. Professor Hayashi created what later became a predecessor of SMART-GS for his studies of history of mathematics, between 2006 and 2007. After some enhancements added in 2008 and 2009, it evolved into early versions of SMART-GS. In 2010, the application got an overhaul, and its further development is in progress.

Professor Hayashi's basic philosophy of development is to create 'information technology for the humanities that a humanist would actually want to use.'

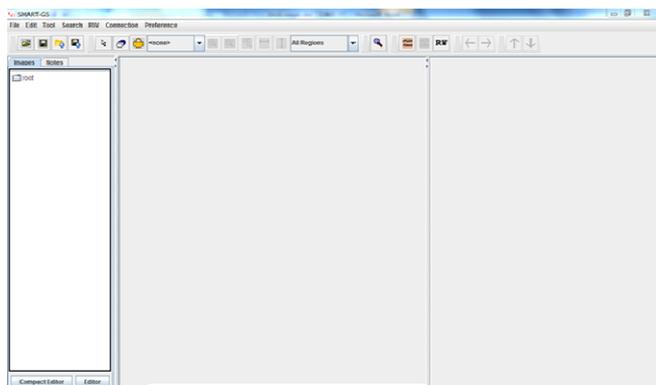
What is characteristic about the development of SMART-GS, is the fact it is developed by its main user. This development model was first introduced by a celebrated computer scientist Donald Knuth, the designer of a typesetting system TeX. TeX was created by Professor Knuth himself to print his theses in high quality. Since its development, it has been widely used by science researchers, greatly contributing to various fields, including mathematics and computer science. SMART-GS was designed in order to play a similar role of an indispensable tool for research in humanities. As such, it is licensed under GPLv2 and distributed as free open-source software.

SMART-GS has 3 distinctive features. 1) It binds digitalized documents with relevant translations, annotations, bibliographical information, explanatory notes, and other forms of text data. 2) It marks up selected spots of both digital images and attached text, and establishes links between marked-up elements. 3) It offers management functions for mark-ups and links, and presents relations between linked elements in a form of diagram.

2-2. Features and Operation of SMART-GS

This chapter explains how SMART-GS works in practice, on the example of the Kuratomi diaries translation process. Details on how to obtain and install SMART-GS are provided in the following article: Nagai Kazu, Kawasaki Akira “SMART-GS wo Riyō shita Yūzaburō Nikki no Honkoku to Kuratomi-ke Shozō Shiryō ni tsuite.” *Nijusseiki Kenkyū* Dec. 2012: 1-41. Print.

SMART-GS is started by double-clicking one of the following files, ‘smart-gs.exe’ or ‘SMART-GS.bat,’ both stored in the ‘smart-gs’ folder. After the application window opens, a screen like the one below (henceforth called the ‘workbench’) appears.



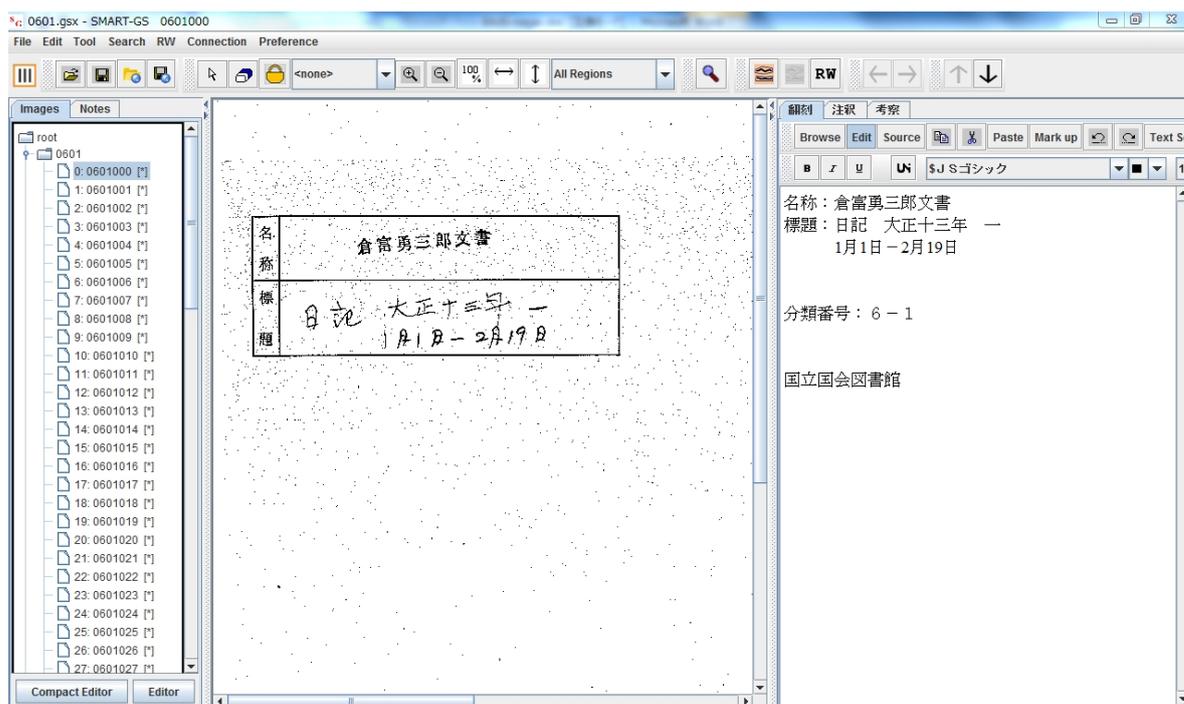
PICTURE 1

The workbench consists of the menu bar and the toolbar, with 3 frames situated below.

A file ‘0601.gsx,’ with the Kuratomi diaries of January, 1924, is used in this article to illustrate how SMART-GS

works. After it is loaded, the diaries' content displays on screen as both a digital image and a text. Files with the extension '.gsx' (henceforth called 'GSX files') are native to SMART-GS, and store entire text data input by the user.

After the file is opened, an image of the document and its corresponding translation text appear on the screen as shown on picture 2. The vertical frame on the left side contains a list of the Kuratomi diaries image files, displayed in a tree form. Each file encompasses 2 pages of the diary. The middle frame displays images, which can be freely zoomed in and out. The right frame is intended for text data, in this particular case – the transcription input by members of the Research Society for the Kuratomi Yūzaburō Diaries. The text frame has an in-built editor, divided into 3 tabs (named 'Translation,' 'Annotations,' and 'Considerations,' respectively), where the text data is entered according to the needs of the user.



Picture 2

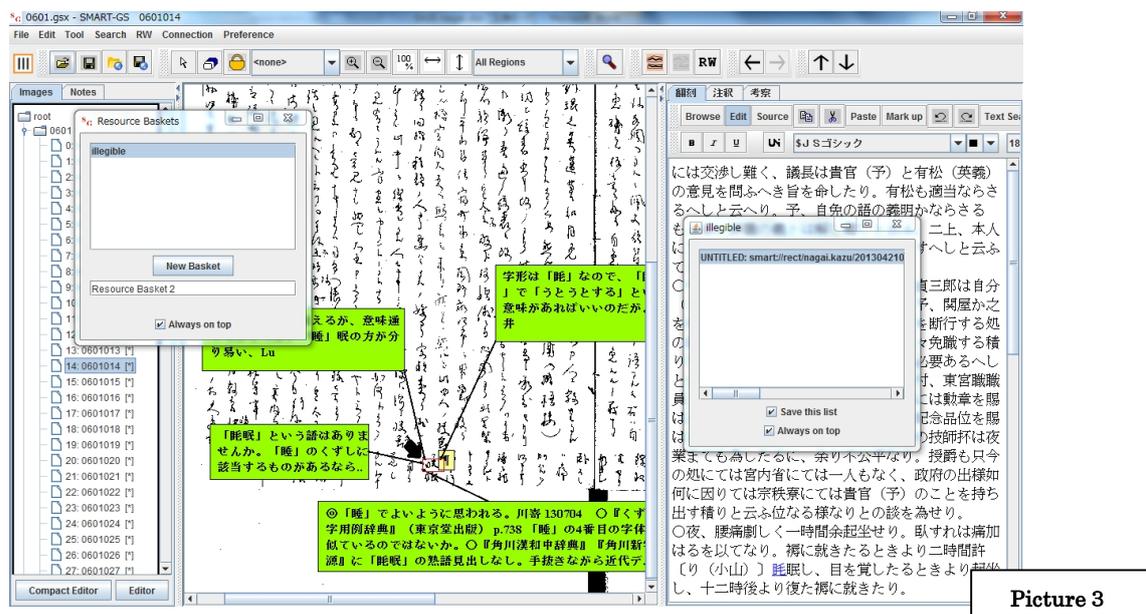
2-3. *Mark-ups and Links*

SMART-GS is equipped with tools to mark up fragments of images and passages of text, and establish links (more precisely referred as 'connections') between the marked-up elements. An address of an external Internet resource can also be designated as a link target.

SMART-GS offers numerous features related to marking up images. This article describes a few most useful ones.

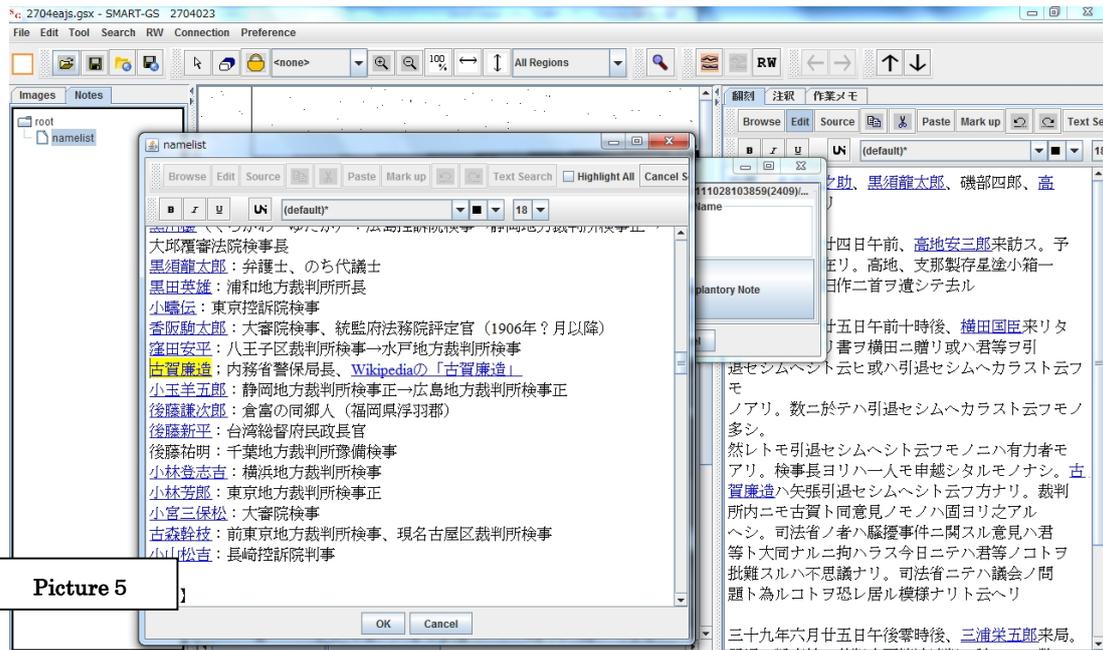
The simplest method to mark a fragment of image up is to use the ‘Rectangle’ function. A marked-up fragment can be enlarged with the ‘Close up’ function, have a ‘Memopad’ sticker attached, or a ‘Bookmark’ inserted.

The ‘Resource Basket’ function gives the user options to register and manage marked-up elements, as well as to group them into sets containing multiple marked-up areas. During work on the Kuratomi diaries, the translation team members mark up characters hard to decipher, and put them into a resource basket labeled ‘illegible,’ to allow easy access to them later. Picture 3 shows a fragment of the diaries of January, 1924, with one character left not deciphered. Adding it into the basket helps to quickly localize it when consulting other members, by a simple message indicating its position within the ‘illegible’ basket of the 0601.gsx file. On picture 3 there are replies from 3 users, left as comments on memopads.

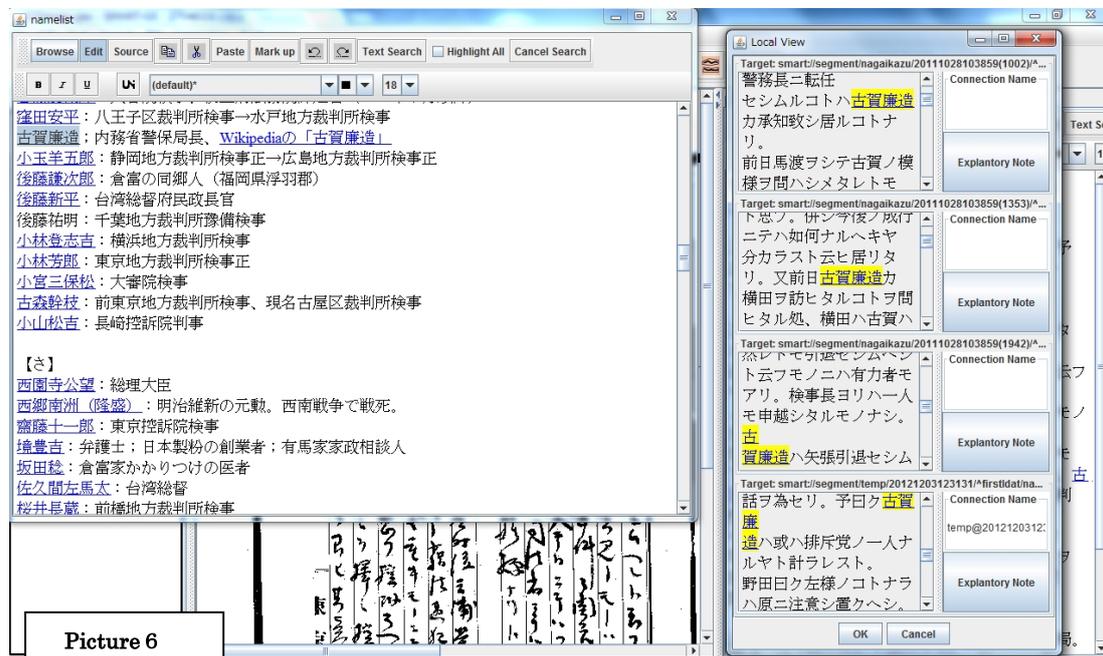


Picture 3

To support better management of marked-up areas, a set of dictionary features has been added. An image of a difficult-to-read character, once deciphered, may be registered in the dictionary together with its reading. When a similar image appears in text again, a user may easily consult the dictionary to look for clues regarding its reading and meaning. Picture 4 presents a ‘Dictionary’ window with previously added characters.



External links, particularly those to Internet resources, are also possible. In the example below, a hyperlink to the Japanese Wikipedia entry on Koga Renzō has been set up.

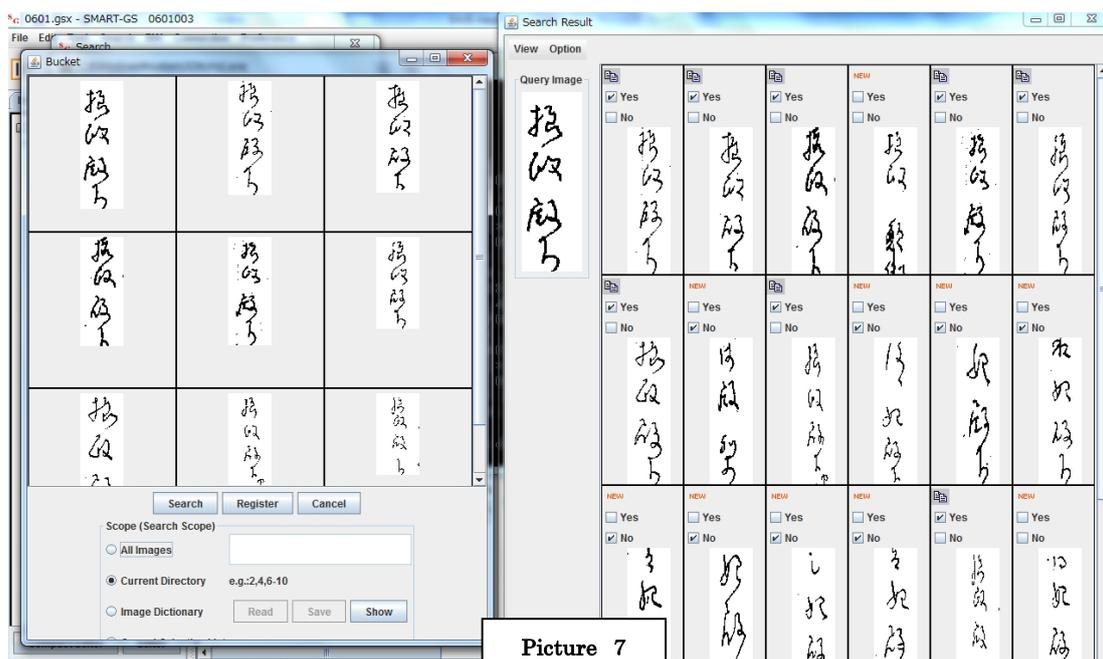


2-4. Image Search and Network Features

The built-in 'Image Search' engine, with implemented 'Transmedia' technology researched and developed by Professor Tanaka Yuzuru's laboratory at Hokkaido University, is one of the most significant selling points of

SMART-GS. Picture 7 illustrates how this function works on an example of a four-character image ‘Sesshō Denka’ (摂政殿下, His Imperial Highness the Prince Regent) from the diaries of January, 1924. After marking this fragment up, clicking the ‘Search’ icon on the task bar initiates a searching procedure for images sharing a certain level of similarity with the marked-up area, and displays its results in a separate window.

Unlike text data, the engine searches for images similar and not identical to the original, so a 100% accuracy is unattainable by assumption. The searching technique used in SMART-GS resembles systems of face recognition implemented in newest graphics editing software. Among search results shown on picture 7, there are also answers other than ‘Sesshō Denka,’ mixed among proper hits. Nonetheless, the application’s self-teaching functions enable to flag all the proper answers, and thus increase the searching accuracy during the next attempt. Furthermore, all the flagged images (or rather their positions) may be saved for easy access afterwards.

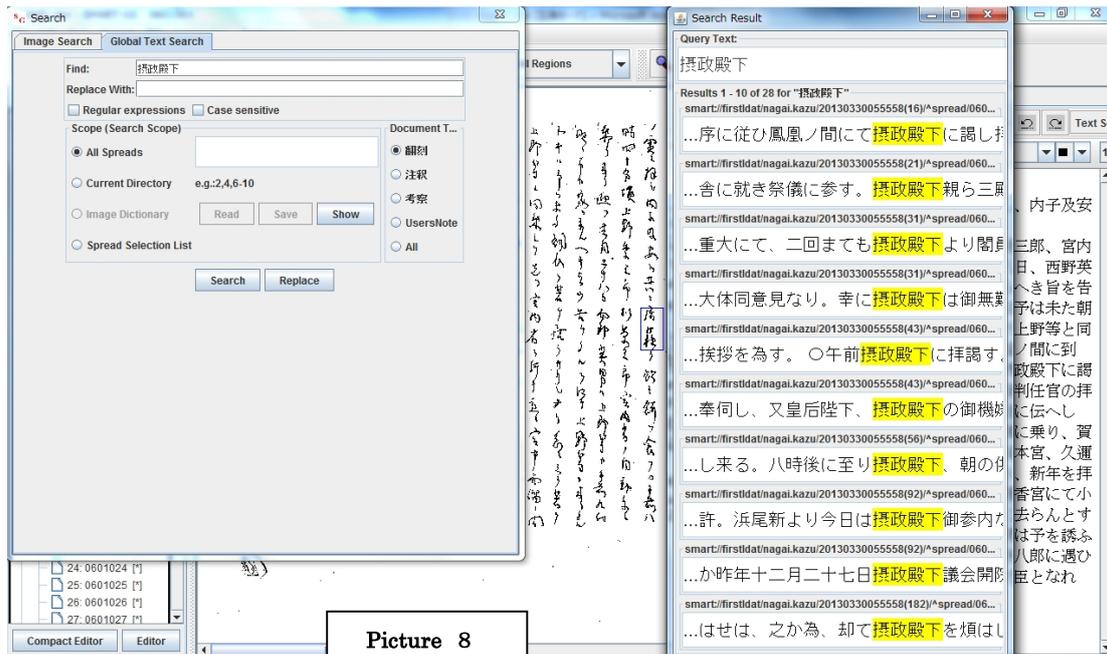


The ‘Image Search’ is a powerful and compelling tool to decipher or analyze historical materials. However, in order to enable this feature, data preprocessing called ‘text line segmentation’ must be performed. The preprocessing creates a series of DSC files that store the results of segmentation. Each page of a handwritten document needs to have every single line of text painstakingly separated one by one, by marking each line up in a rectangle, and

saving information regarding its position so SMART-GS can process it. In case of the voluminous Kuratomi diaries, the operation of preprocessing turned out extremely time-consuming, and finally took over half a year to complete.

Naturally, SMART-GS has also an implemented text search function to be used on text data input by the user and stored in GSX files, including the content of the ‘Translation,’ ‘Annotations,’ and ‘Considerations’ tags, and any other form of the user’s memos. With a bulk of data to be processed in voluminous documents like the Kuratomi diaries, this form of search is obviously more effective than performing an image search. Picture 8 presents an example of text search results for the phrase ‘Sesshō Denka’ within the diaries of January, 1924.

Any text data created with SMART-GS can be extracted and imported to word processing software, like Microsoft Word, for further processing to prepare the text for printing.



Picture 8

When the full-scale development of SMART-GS began, a plan was launched to enable multiple users work simultaneously on the same project via the Internet. The first step to make SMART-GS a net-oriented tool was to add WebDAV client functions in 2009. SMART-GS saves all information except image data in GSX files. The idea is to store a GSX file on a remote WebDAV server, and allow more than one person to access and edit it.

For an application designed for a cooperative working environment, the present web functions implemented in SMART-GS are still in their infancy. Yet, they already allow multiple users to work in team on long texts like the Kuratomi diaries, directly observe one another's progress, and cross-check the other users' allotted fragments of translation. There is no need of file exchange, and obtaining feedback from the rest of the team has become simpler. Not deciphered fragments may be marked-up and left for the other members to consult.

In order to use the WebDAV client functions, an accessible WebDAV server is required. In the Kuratomi diaries translation and publishing project, a server of the Laboratory of Data Engineering and Archiving at the National Institute of Informatics has been used, by courtesy of Associate Professor Aihara Kenrō. However, the implementation of WebDav in SMART-GS is not free from problems, a slow server response being one of them. Consequently, extensive changes are planned in the application's Internet functions.

2-5. Problems and Benefits of Using SMART-GS

As has been stated earlier in this article, before introducing SMART-GS the work on the Kuratomi diaries required first to obtain printed copies of the microfilms. The translation itself was a *de facto* process of rewriting the content from paper to a computer file, using word processing software and a keyboard. Unreadable characters were viewed through a magnifying glass under different angles, and if this brought no effect, marked with a pen or a pencil. This method of work requires constant shifting sight from a paper document to a computer display and vice versa, and involves frequent breaks in typing in order to take a careful look on handwritten text. It can become a significant source of stress, and cause a backache after long hours of work. However, introducing SMART-GS largely reduced the abovementioned inconvenience, as the whole translation can be performed only with a mouse and a keyboard, virtually without taking one's eyes off the screen. Unreadable characters can be enlarged, and a search of similar images quickly performed. Flagging them with bookmarks also poses no difficulties. The fact the whole operation can be done on-screen is an important advantage of SMART-GS, as it effectively increases

work efficiency. The stress reduction factor is particularly important with large texts, like the Kuratomi diaries, which require long years to be transcribed for printing. Furthermore, the diaries, which take up a lot of space physically, after digitalization can be stored on a small portable harddrive, and conveniently carried.

SMART-GS integrates digital images of handwritten texts with the user's transcription, but the possibility it gives to simultaneously work on the project as a team proves to be an even more significant feature. Characters left not deciphered at a translation stage are marked up, and can be quickly traced by proofreaders. With only a printed copy of a document and a word processor available, in many cases one had to laboriously browse page by page through the document to find untranslated passages. Using SMART-GS eliminated this inconvenience.

In addition, since both the image and text data are treated integrally, results of the translator's work can be easily surveyed by the proofreader on an ongoing basis. Analogically, the translator can access the proofreader's revision in an equally simple way. This method of sharing results contributes to team work and overall effectiveness, and, needless to say, so do the in-built online features.

Introducing SMART-GS has greatly reduced the difficulties pertaining to preparing voluminous handwritten documents, like the Kuratomi diaries, for printing. In case of any comparable project, SMART-GS can be used as a powerful tool that remarkably increases work efficiency.

However, there are still some problems to cope with. Above all, in order to be used in SMART-GS, paper documents need to be scanned first, which itself is a time- and cost-consuming operation. Similarly, image search features may be very handy, but their use must be preceded by the arduous preprocessing ('text line segmentation'). The fact SMART-GS is developed by its users, although considered one of its big appeals, may cause problems, too. For instance, the Research Society for the Kuratomi Yūzaburō Diaries members, not directly involved in the application development, had to face the following issues.

The user interface in SMART-GS is not particularly complicated, and one can learn the application's main functions intuitively and relatively quickly. Problems start when it comes to troubleshooting. The trouble likely to occur in SMART-GS can be of two types: either caused simply by the user's mistakes, or

by software bugs. The development team is limited in number, and not necessarily detailed on the Society members' operation environment. Thus, expecting them to cope with every reported trouble would be far from reasonable. In this situation, there is a necessity to isolate problems that can be solved without help from those that require the developer's intervention. Yet, in some circumstances this distinction may be ambiguous. The responsibility for coping with crisis situations has been taken up by the author, but in a few cases there was no possibility to properly deal with a problem. Each of those cases ended with reinstalling the system. When one of the application's functions suddenly stopped working, it was more effective to restore the system than to attempt to identify a reason of failure.

Other issues are related mostly to the WebDAV features currently implemented in SMART-GS. These are particularly problems with establishing connection with the WebDAV server, logging in, releasing locks from stored GSX files, or proper displaying a file list during attempts to open a file from the server. The developers' intentions are to completely remodel the online features of SMART-GS in the near future, so the current WebDAV implementation should be viewed as an interim solution. For the moment, not only the Internet functions are unreliable in certain situations, but even basic operations regarding standardizing and maintaining the online work environment between multiple users pose numerous difficulties, too.

(translated by Janusz Mytko)