NAVER

NAVER Corporation

System and Organization Controls 3 Report

On Controls Relevant to Security, Availability, Processing Integrity, Confidentiality, and Privacy of BAND Service

January 1, 2019 – December 31, 2019

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Section I: Independent Service Auditor's Report

NAVER Corporation

NAVER Green Factory, 6, Buljeong-ro,

Bundang-gu, Seongnam-si,

Gyeonggi-do, Korea

Scope

We have examined NAVER Corporation("NAVER", the "service organization", or the "Company")'s accompanying assertion titled "Section II: Management's Assertion" ("assertion") that the controls within BAND Service system ("system") were effective throughout the period January 1, 2019 to December 31, 2019, to provide reasonable assurance that NAVER's service commitments and system requirements were achieved based on the trust services criteria relevant to Security, Availability, Processing Integrity, Confidentiality, and Privacy ("applicable trust services criteria") set forth in TSP Section 100, *2017 Trust Services Criteria for Security, Availability, Processing Integrity, Confidentiality, and Privacy* (AICPA, *Trust Services Criteria*).

Service Organization's Responsibilities

NAVER is responsible for its service commitments and system requirements and for designing, implementing, and operating effective controls within the system to provide reasonable assurance that NAVER's service commitments and system requirements were achieved. NAVER has also provided the accompanying assertion about the effectiveness of controls within the system. When preparing its assertion, NAVER is responsible for selecting, and identifying in its assertion, the applicable trust services criteria and for having a reasonable basis for its assertion by performing an assessment of the effectiveness of the controls within the system.

Service Auditor's Responsibilities

Our responsibility is to express an opinion, based on our examination, on whether management's assertion that controls within the system were effective throughout the period to provide reasonable assurance that the service organization's service commitments and system requirements were achieved based on the applicable trust services criteria. Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform our examination to obtain reasonable assurance about whether management's assertion is fairly stated, in all material respects. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Our examination included:

- Obtaining an understanding of the system and the service organization's service commitments and system requirements
- Assessing the risks that controls were not effective to achieve NAVER's service commitments and system requirements based on the applicable trust services criteria

- Performing procedures to obtain evidence about whether controls within the system were effective to achieve NAVER's commitments and system requirements based on the applicable trust services criteria

Our examination also included performing such other procedures as we considered necessary in the circumstances.

Inherent limitations

There are inherent limitations in the effectiveness of any system of internal control, including the possibility of human error and the circumvention of controls.

Because of their nature, controls may not always operate effectively to provide reasonable assurance that the service organization's service commitments and system requirements were achieved based on the applicable trust services criteria. Also, the projection to the future of any conclusions about the effectiveness of controls is subject to the risk that controls may become inadequate because of changes in conditions or that the degree of compliance with policies or procedures may deteriorate.

Opinion

In our opinion, management's assertion that the controls within NAVER's BAND Service system were effective throughout the period January 1, 2019, to December 31, 2019, to provide reasonable assurance that NAVER's service commitments and system requirements were achieved based on the applicable trust services criteria is fairly stated, in all material respects.

Deloitte Anjin LLC.

April 10, 2020
Seoul, Republic of Korea

NAVER

Section II: Management's Assertion

NAVER Corporation's Management Assertion

We are responsible for designing, implementing, operating, and maintaining effective controls within NAVER Corporation("NAVER")'s BAND Service system ("system") throughout the period January 1, 2019, to December 31, 2019, to provide reasonable assurance that NAVER's service commitments and system requirements relevant to security, availability, processing integrity, confidentiality, and privacy were achieved. Our description of the boundaries of the system is presented in "Section III: Description of the Boundaries of BAND Service System" ("description").

We have performed an evaluation of the effectiveness of the controls within the system throughout the period January 1, 2019 to December 31, 2019, to provide reasonable assurance that NAVER's service commitments and system requirements were achieved based on the trust services criteria relevant to security, availability, processing integrity, confidentiality, and privacy ("applicable trust services criteria") set forth in TSP section 100, *2017 Trust Services Criteria for Security, Availability, Processing Integrity, Confidentiality, and Privacy* (AICPA, *Trust Services Criteria*). NAVER's objectives for the system in applying the applicable trust services criteria are embodied in its service commitments and system requirements relevant to the applicable trust services criteria. The principal service commitments and system requirements related to the applicable trust services criteria are presented in Section IV.

There are inherent limitations in any system of internal control, including the possibility of human error and the circumvention of controls. Because of these inherent limitations, a service organization may achieve reasonable, but not absolute, assurance that its service commitments and system requirements are achieved.

We assert that the controls within the system were effective throughout the period January 1, 2019, to December 31, 2019, to provide reasonable assurance that NAVER's service commitments and system requirements were achieved based on the applicable trust services criteria.

Section III: Description of the Boundaries of BAND Service System

1. Overview of Operations

Company Introduction

NAVER Corporation (referred to as 'NAVER', the 'Company', or the 'service organization' hereinafter) was incorporated on June 2, 1999 and the Company listed its shares on the KOSDAQ on October 29, 2002, but later transferred its shares to the KOSPI on November 28, 2008.

Built on its search engine technology, large database processing capability, diverse contents, and so on, NAVER retains 42 million subscribers with approximately 30 million users on average accessing its services daily. This makes the Company the top web portal service provider in Korea.

Its key services include an integrated search service that provides various information such as news, professional data, images and so on, the Personal Web Environment[1] service including mail, cloud and other services, user-generated content (UGC) platforms including the Knowledge iN, blogs and cafes, contents services such as webtoons, web novels, music and videos, and shopping services including the Shopping Window and the Smart Store and so on.

The Company expanded its business landscape to provide simple payment and integrated payment services in June 2015, by launching the NAVER Pay, a service that enables the users to shop at various online stores, pay for digital music, movies, e-books offered by NAVER and charge and transfer credits or money using NAVER ID. The service is generating a synergy effect through its connection with other existing services. Since November 2019, we are expanding our new business area to techfin by establishing a new affiliate, Naver Financial Corporation, and we plan to ultimately grow to an integrated asset management platform by providing various financial services to users and businesses.

NAVER supports a number of individuals, small businesses, and creators with the services, technologies, and platforms for their sustainable growth, and endeavors to build a healthy internet ecosystem with various partners. NAVER also shares experiences and knowhow with startups having outstanding skills through the startup accelerator "D2 Startup Factory", in order to open a way to cooperate with technology startups by providing an environment that they can concentrate on developing technologies and products.

More recently, NAVER is leaping forward to become a technology platform focused company, concentrating on the services such as artificial intelligence based service 'Clova', autonomous driving technology, robotics, translation application 'Papago', web browser 'Whale', and so on. NAVER is pursuing changes and innovations in technology platforms by continuously researching and developing the future technologies such as artificial intelligence, robotics, and mobility. NAVER strives to grow together with numerous users and diverse partners from around the world.

[1] Personal Web Environment (PWE) service: PWE is a NAVER service that allows users to configure and administrate their personal data in the way they want. This includes platforms such as e-mail, calendar, memo, address book, and the like.

Service

NAVER provides services through PC web and mobile for the users' convenience. To deliver such services, NAVER uses various IT systems, security devices, and internally developed service management systems. The system description covers the following services:

- BAND – A representative group SNS service that provides invitation-based community service between members. The service allows users to set up a BAND of their passion and share their interest with message board, photos, schedules, and instant messages.

Users of the service are responsible to adhere to the user's obligation in the Terms of Service in order to securely and properly use the NAVER services. Users should also understand and perform the activities to protect personal information by themselves, including changing passwords on a regular basis and not disclosing passwords to others.

Report Scope Boundary

The scope of this Description is limited to the BAND service. This Description does not include details related to other services.

2. Service Components

The Company's service components to provide the service consist of infrastructure, software, data, and relevant operating procedures and human resources.

Infrastructure

The Company implements and operates infrastructures such as servers, network, and security systems, which are configured in a separate network for each, to provide the service. The Company restricts unauthorized access (physical / logical) using access controls to infrastructures, and monitors the log of abnormal activities on a regular basis.

The Company also uses automatic vulnerability scanning tools to consistently detect and improve security vulnerabilities which may occur within the infrastructure, and takes remedial actions for identified vulnerabilities. The data center, where the infrastructures are located, is equipped with thermo-hygrostats, Uninterruptible Power Supplies (UPS), water leakage detectors, fire detectors, extinguishers, and so on to get prepared for disasters such as fire, earthquake, flood, and so on.

Software

Relevant functions of the Company for each service are responsible for developing and operating applications. When an application needs additional developments or upgrades to improve service quality provided to users, to remediate failures or to enhance system performance, the security requirements are defined by an agreement between the Service Planning Department and the Development Department and then shared with stakeholders via intranet.

Changes to an application requires preapproval by the person in charge, and the QA(Quality Assurance) team reviews and deploys to the production environment through the automated system to minimize the failures that may arise from the change. When significant changes related to the user's personal information processing are involved, a privacy impact assessment is conducted and remedial actions are taken when deemed necessary.

Human Resources

To ensure service stability, the Company defines and designates such roles as information security and personal information managers, service planners, developers, infrastructure operators, CS (Customer Satisfaction) personnel, and so on. Annual information security and personal information protection trainings are provided to raise the awareness level of information security of the company personnel.

Immediately after being hired or terminated, an employee is informed of his or her confidentiality obligations, and required to sign and submit a security pledge. All employees sign and submit a security pledge every year.

Data

Important data including user's personal information are protected in accordance with the requirements by relevant laws and regulations such as the Act on Promotion of Information and Communications Network Utilization and information Protection, etc., the Personal Information Protection Act, and so on and the procedures specified in the Terms of Service and security policies of the Company. Such data are managed to be processed only by a limited number of personnel performing relevant duties.

The Company also implements technical measures such as access control, encryption and logging to protect important data.

Procedures

The Company established information security regulations such as policies, standards and guidelines to comply with the security, availability, process integrity, confidentiality, and privacy principles. Company policies are periodically reviewed, and revised when deemed necessary, to reflect developments of relevant laws and regulations. Revisions require approval by an appropriate level of management and are announced to all employees through intranet.

Company policies related to protection of user's personal information and privacy are disclosed in the Privacy section on the Company's website so that users can refer to at any time.

Section IV: Principal Service Commitments and System Requirements

The Company has made service commitments to the users and established system requirements for the BAND service. Some of these commitments are related to the performance of the service and applicable trust services criteria. The Company is responsible for its service commitments and system requirements and for designing, implementing, and operating effective controls within the system to provide reasonable assurance that the Company's service commitments and system requirements are achieved.

Service commitments to users are documented in such forms as Terms of Service, Privacy Policy, Youth Protection Policy, Spam Mail Policy, Search Result Collection Policy, and so on, and communicated to users through the Customer Center. The Company also provides the description of the service offering through online. Service commitments include, but are not limited to, the following:

- Security: The Company made commitments related to protecting user data from unauthorized access and use. These commitments are addressed through measures including data encryption, authentication mechanisms, access controls, physical security, and other relevant security controls.
- Availability: The Company made commitments related to keeping service continuity without disruptions. These commitments are addressed through measures including performance monitoring, regular data backups and recovery controls.
- Processing Integrity: The Company made commitments related to processing user data completely, accurately and timely. These commitments are addressed through measures including secured system development and production environments, approval of system changes and other relevant controls.
- Confidentiality: The Company made commitments related to maintaining the confidentiality of user data. These are addressed through security controls including encryption mechanisms in transferring and storing users' important data.
- Privacy: The Company made commitments related to protecting personal information. These commitments are addressed through controls relating to collecting, storing, using, entrusting, and disposing of personal information in accordance with relevant laws and regulations and its Privacy Policy.

The Company has established operational requirements that support the achievement of service commitments, requirements by relevant laws and regulations, and other system requirements. Such requirements are specified in the Company's policies and procedures, system design documentation and communicated to users through the service website.

Information security policies of the Company define an organization-wide approach to how systems and data are protected. These include policies over service design and development, system operation, internal business system and network management, and hiring and training of executives and employees. In addition to these policies, standard operating procedures have been documented on how to carry out manual and automated processes specifically required in the operation and development of the BAND service.