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Introduction

A person who engages in a task for standardization is requested to have experience, achievement, capability and knowledge for the standardization, such as contribution, communication, negotiation, leadership, presentation, technology, etc. Today standardization has been an important strategy for an organization, corporation and nation. Therefore, human resources for standardization are strongly required and education for standardization becomes essential.

In order to collect appropriate human resources for actual tasks for standardization and to carry out effective education of standardization, it becomes indispensable

- to clarify the tasks required for standardization, and
- to clarify the skills required for the tasks.

Those clarifications are to develop a skill standard itself: Skill standard - Evaluation for skills of human resource required for standardization

There have been developed in Japan two other skill standards,

- Skill standard - Evaluation for skills of human resource required for intellectual property, and
- Skill standard - Evaluation for skills of human resource required for information technology.

They are actually used in a number of corporations.

The Skill standard - Evaluation for skills of human resource required for standardization will make it possible or feasible for a person or corporation to

- apprehend and describe existing situation of standardization human resource,
- set a target of education for standardization human resource,
- evaluate effects of standardization education,
- collect standardization human resources,
- re-allocate standardization human resource,
- develop education programs or materials for standardization human resource.

Accordingly the Skill standard will make it possible or feasible for a nation to strengthen its global competitiveness in the international industry.

Kanazawa Institute of Technology established a project for developing Skill standard, in response to the commission from the Ministry of Economy, Trade and Industry (METI). The project began its activities in June 2012 and finished them in Feb. 2013, and developed documents of the Skill standard were submitted to METI. After march 2013, following-up activities of the project have been taken by SG-SSS (Study Group on Skill Standard for Standardization) in Institute of Image Electronics Engineers of Japan.

The Skill standard specifies all the tasks required for standardization and defines the skill required for those tasks. The skills and skill levels are described in skill cards corresponding to the tasks. Skill card is a set of data for items of skill evaluation criteria on performance and capability.

Skill standard — Evaluation for skills of human resource required for standardization

Ver.1.02

1 Scope

This standard clarifies tasks for standardization and provides evaluation for skills of human resource required for the tasks, specifying skill evaluation criteria and skill levels of the tasks. The human resources are those who are engaged in the tasks for standardization in corporations, or development of international standards and associated activities for international standardization.

Note 1 This standard can be applied to a guideline for a corporation to employ and educate human resources for standardization, and a guideline for a personal to set a goal for his/her career development.

Note 2 The title of this standard may be simply noted as "Standardization skill standard".

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document.

JIS Z 8301, Rules for the layout and drafting of Japanese Industrial Standards

Skill standard - Evaluation for skills of human resource for intellectual property, Ministry of Economy, Trade and Industry, 2007-03, <http://www.meti.go.jp/policy/economy/chizai/ipss/index.html>

3 Terms and definitions

3.1

standardization human resource

a person who carries out the tasks for standardization (see clause 5)

3.2

skill

experience and achievement on carrying out a task, and capability and knowledge required for the task

3.3

skill card

a set of data for items of skill evaluation criteria on performance and capability

3.4

de jure standard

a standard developed by a public standardization organization

3.5

forum/consortium standard

a standard developed by a group called forum or consortium, that consists of interested members

3.6

de facto/company-product standard

a specification that has achieved a dominant position by public acceptance or market forces, or a company specific convention that has been widely used within products on market

Note 3 Forum/consortium standards are sometimes classified into a private standard due to their unpublic standardization procedure. Company-product standards are sometimes called as private standards. In this standard, company-product standards do not include forum/consortium standards.

3.7

houserule

a specification used only within a specific organization

Note 4 A specific organization is a corporation, factory, etc.

3.8

leader

a person who takes major responsibility for assigned tasks, and for his/her subordinates and associates related

3.9

person in charge

a person who takes responsibility within his/her own scope of assigned tasks

3.10

assistant

a person who takes no responsibility for his/her tasks

3.11

strategy for standardization

A scheme for nations, organizations or individuals to maximize the benefits of standardization from their standardization's point of view. In the scheme, objects to be standardized and not to be standardized are clarified, Regarding the objects to be standardized, organization, schedule, resources and procedures for the standardization are discussed and effective application and implementation of the developed standard are planned.

Note 5 Covering areas of the strategy depend on the subject that will plan the strategy and that will employ the strategy. In the task "1) Strategy planning for standardization" (see Table 1), activities of a nation or organization are planned considering the benefits of standardization from nation's or organization's point of view. In the task "2) Information collecting/analyzing/evaluating and tactics planning", activities of standardization groups of an organization are planned (tactics planning) in accordance with the plan discussed in the task 1). In the tasks 11) through 22), activity plans and guidelines for the groups of standards development are clarified in accordance with the tactics plan discussed in the task 2).

3.12

experience

history in which a person carried out his/her tasks passively or actively

3.13

achievement

objective progress as a result that a person carried out his/her tasks actively

4 Structure and notations

The structure and notations of this standard are based on JIS Z 8301. The composition where skills are defined for all the categorized tasks has adopted that of skill standard - Evaluation for skills of human resource for intellectual property.

Skills required for each task are specified in a skill card, where all the skill items are described indicating the difference from the skill card template. The template includes the minimum common descriptions for all skill cards (see clause 7). This notation makes it feasible to show the difference between skills required for different tasks and difference between levels of skill required for a task, and to show a conformable relationship between task and skill.

As for the skill card for the task "1) Strategy planning for standardization" (see Table 1) and skill cards of level 2 for all other tasks, the descriptions with underline show the difference from the template and the descriptions using subscript characters show deletion from the template. As for the skill cards of level 1 and level 3 for the tasks, the descriptions with bold characters shows addition to the corresponding skill card of level 2, and the description using subscript characters show deletion from the corresponding skill card of level 2.

5 Tasks for standardization

All the tasks required for standardization are categorized in table 1, where the vertical axis shows task phase including strategy, development, implementing and promotion, and the horizontal axis shows standard type including de jure standards, forum/consortium standards, de facto/company-product standards and houserules. Those types are defined in clause 3.4 through 3.7 from the task classification's point of view. The task phases are not always standard development steps themselves. They may be carried out concurrently or cyclically.

Each task of standardization in a cell of Table 1 is assigned with a sequential number.

Table 1 Tasks for standardization

			Standard Type						
			De jure standards	Forum/Consortium standards	De facto/Company-product standards	House rules	All types		
Task Phase	Strategy	Strategy planning	1) Strategy planning for standardization				34) Considering compliance	35) Considering human resource development	36) Considering intellectual properties
		Tactics planning	2) Information collecting/analyzing/evaluating and tactics planning						
			3) Supervising (Strategy)						
			4) Liaison establishing (Strategy)			N/A			
		Founding organization	5) Founding organization (De jure standards)	6) Founding organization (Forum/Consortium standards)	7) Founding organization (De facto/Company-product standards)	N/A			
	Managing organization	8) Managing organization (Strategy, De jure standards)	9) Managing organization (Strategy, Forum/Consortium standards)	10) Managing organization (Strategy, De facto/Company-product standards)	N/A				
	Development	Developing technology	11) Developing associated technology						
		Developing standards	12) Proposing new work items (De jure standards)	13) Proposing new work items (Forum/Consortium standards)	14) Proposing new work items (De facto/Company-product standards)				
			15) Drafting standards (De jure standards)	16) Drafting standards (Forum/Consortium standards)	N/A				
			17) Negotiating (De jure standards)	18) Negotiating (Forum/Consortium standards)	19) Marketing (De facto/Company-product standards)	N/A			
		Managing organization	20) Managing organization (Development, De jure standards)	21) Managing organization (Development, Forum/Consortium standards)	22) Managing organization (Development, De facto/Company-product standards)	N/A			
		Implementing	Applying standards	23) Applying standards					
	Acquiring certification		24) Conformance testing			N/A			
			25) Acquiring certification	26) Acquiring forum certification	27) Acquiring private certification	N/A			
	Promotion	Promotion planning	28) Information collecting/analyzing/evaluating and promotion planning			N/A			
			29) Supervising (Promotion)			N/A			
			30) Liaison establishing (Promotion)			N/A			
		Advertising	31) Advertising (De jure standard)	32) Advertising (Forum/Consortium standards)	33) Advertising (De facto/Company-product standards)	N/A			

The tasks 1) through 36) are shown below. The skill required for each task is defined by the corresponding skill card (see clause 8).

1) Strategy planning for standardization

Standardization activities of a nation or organization are planned considering the benefits of standardization from nation's or organization's point of view. This task is carried out mainly by officers.

2) Information collecting/analyzing/evaluating and tactics planning

Associated standardization information inside/outside an organization is collected, analyzed and evaluated. Then, activities of standardization groups of an organization are planned (tactics planning) in accordance with the plan discussed in the task 1). The tactics are reported to officers.

3) Supervising (Strategy)

Based on the tactics planned in the task 2), collaboration and coordination are performed with internal/external stakeholders, e.g., research and development groups and associated organizations.

4) Liaison establishing (Strategy)

Based on the tactics planned in the task 2), lobbying activities with government and standardization organizations are performed to share information and to establish a close liaisonship with them.

5) Founding organization (De jure standards)

In accordance with the strategy for standardization, organizations for de jure standards development and their certification are founded.

6) Founding organization (Forum/Consortium standards)

In accordance with the strategy for standardization, organizations for forum/consortium standards development and their certification are founded.

7) Founding organization (De facto/Company-product standards)

In accordance with the strategy for standardization, organizations for de facto/company-product standards development and their certification are founded.

8) Managing organization (Strategy, De jure standards)

Strategies for managing following organizations are planned and carried out: organizations for de jure standards development, organizations for their maintenance and certification.

9) Managing organization (Strategy, Forum/Consortium standards)

Strategies for managing following organizations are planned and carried out: organizations for forum/consortium standards development, organizations for their maintenance and certification.

10) Managing organization (Strategy, De facto/Company-product standards)

Strategies for managing following organizations are planned and carried out: organizations for de facto/company-product standards development, organizations for their maintenance and certification.

11) Developing associated technology

In accordance with the strategy for standardization, technologies associated with standards (including patent-workaround technology) are developed to make some feedback to the strategy or tactics.

12) Proposing new work items (De jure standards)

In accordance with the strategy for standardization, new work items for de jure standards are proposed to establish projects for the standards development.

13) Proposing new work items (Forum/Consortium standards)

In accordance with the strategy for standardization, new work items for forum/consortium standards are proposed to establish projects for the standards development.

14) Proposing new work items (De facto/Company-product standards)

In accordance with the strategy for standardization, new work items for de facto/company-product standards are proposed to establish projects for the specifications development.

15) Drafting standards (De jure standards)

In accordance with the strategy for standardization, draft de jure standards are developed, reviewed and commented in a project of a standardization committee. Acceptable comments are included in the draft standards. Based on detailed review, some draft standards are amended, revised or withdrawn.

16) Drafting standards (Forum/Consortium standards)

In accordance with the strategy for standardization, draft forum/consortium standards are developed, reviewed and commented in a project of a standardization committee. Acceptable comments are included in the draft standards. Based on detailed review, some draft standards are amended, revised or withdrawn.

17) Negotiating (De jure standards)

In accordance with the strategy for standardization, information sharing and cooperation with other members are performed to have a concerted action regarding the de jure standard to be accepted or objected.

18) Negotiating (Forum/Consortium standards)

In accordance with the strategy for standardization, information sharing and cooperation with other members are performed to have a concerted action regarding the forum/consortium standard to be accepted or objected.

19) Marketing (De facto/Company-product standards)

In accordance with the strategy for standardization, specifications of the products on markets are investigated and analyzed from users' point of view.

20) Managing organization (Development, De jure standards)

In accordance with the strategy for standardization, organizations for de jure standards development (e.g., standardization committee) and organizations for their certification are managed.

21) Managing organization (Development, Forum/Consortium standards)

In accordance with the strategy for standardization, organizations for forum/consortium standards development (e.g., standardization committee) and organizations for their certification are managed.

22) Managing organization (Development, De facto/Company-product standards)

In accordance with the strategy for standardization, groups for specifications development and groups for their certification are managed.

23) Applying standards

Due to manufacturing control, associated measurement and evaluation in corporation, quality management is performed conforming to associated standards.

24) Conformance testing

It is evaluated whether the products conform to corresponding standards, and self-certification check and compatibility testing are performed.

25) Acquiring certification

A certification authority is requested to assess the products/systems in which the de jure standard are implemented, and the certification is gained.

26) Acquiring forum certification

A certification authority is requested to assess the products/systems in which the forum/consortium standards are implemented, and the certification is gained.

27) Acquiring private certification

A certification authority is requested to assess the products/systems in which the de facto/company-product

standards or specifications are implemented, and the certification is gained.

28) Information collecting/analyzing/evaluating and promotion planning

Information on the developed standards is widely collected, analyzed and evaluated. Then, strategies for promotion of the standards are planned. The promotion strategies are reported to officers.

29) Supervising (Promotion)

Based on the promotion strategies planned in the task 28), collaboration and coordination are performed with internal/external stakeholders.

30) Liaison establishing (Promotion)

Based on the promotion strategies planned in the task 28), lobbying activities with government and standardization organizations are performed to share information and to establish a close liaisonship with them.

31) Advertising (De jure standard)

Tutorials and advertisement of the developed de jure standards are conducted in order to promote and accelerate wide use and implementation of the standards.

32) Advertising (Forum/Consortium standards)

Tutorials and advertisement of the developed forum/consortium standards are conducted in order to promote and accelerate wide use and implementation of the standards.

33) Advertising (De facto/Company-product standards)

Tutorials and advertisement of the developed de facto/company-product standards are conducted in order to promote and accelerate wide use and implementation of the standards or specifications.

34) Considering compliance

Legal compliance, lawsuit correspondence, fair trade correspondence and Correspondence to accessibility are performed.

35) Considering human resource development

In order to raise skills of human resource required for standardization, programs for the education are developed and carried out for members of a corporation.

36) Considering intellectual properties

In accordance with the strategy for standardization, patent policies, patent pools and other information about intellectual properties for related standards are collected, and patent contract activities are supported.

6 Skill evaluation criteria and skill levels

6.1 Skill evaluation criteria

Skill card is a set of data for items of skill evaluation criteria on performance and capability.

6.1.1 Evaluation criteria on performance

To evaluate the skill required for tasks for standardization, skill evaluation criteria on performance (experience and achievement on carrying out a task) defines the following items:

a) Responsibility

Responsibility indicates a area size of the standardization task that the person has to cover with responsibility, by using his/her position in performing the task.

b) Experience

Experience indicates history in which a person carried out his/her standardization tasks passively or actively.

c) Achievement

Achievement indicates objective progress in which a person carried out his/her standardization tasks actively.

d) Contribution

Contribution indicates the facts that a person carried out his/her tasks, which were not directly related to standardization itself and were contributed to external or internal of his/her corporation.

6.1.2 Evaluation criteria on capability

To evaluate the skill required for tasks for standardization, skill evaluation criteria on capability (capability and knowledge required for the task) defines the following items:

e) Business comprehension

Knowledge and capability to comprehend the business to carry out the tasks for standardization.

f) Communication

Knowledge and capability to establish human networks by collecting, providing and sharing information of standardization via communication.

g) Negotiation

Knowledge and capability to make it possible to form consensus via assertion and persuasion in carrying out the tasks of standardization.

h) Planning

Knowledge and capability to extract issues and find appropriate solutions in carrying out the tasks for standardization.

i) Leadership

Knowledge and capability to manage a standardization organization and to lead the members of the organization.

j) Presentation

Knowledge and capability to make a presentation and draft documents using a language required in carrying out the tasks for standardization.

k) Technology

Knowledge and capability to comprehend the technology required in carrying out the tasks for standardization.

l) Operation

Knowledge for various activities required in carrying out the tasks for standardization, and capability to operate and manage the knowledge.

m) Miscellaneous

Cross-cultural understanding, foresight, concentration, motivation, charisma, and the knowledge/capability that are difficult to improve through training.

6.2 Skill levels

The skills of human resources required for the tasks for standardization (see clause 5) are classified into the following three levels.

a) Level 1 – Possessing an experience on carrying out the tasks for standardization, and capable of finding operational issues and solving them under the guidance of a leader.

b) Level 2 – Possessing an experience and achievement on carrying out the tasks for standardization, and capable

of finding operational issues and solving them without guidance of a leader (**autonomously**), or capable of solving the issues by collaborating with other members.

- c) Level 3 - Possessing multiple experiences and achievements on carrying out the tasks for standardization, and capable of providing leadership for finding operational issues and solving them, and capable of providing guidance to his/her subordinate as a leader (**with leading**).

Each level of skills required for the tasks for standardization is defined by the corresponding skill card which includes a set of data for items of skill evaluation criteria on performance and capability. However, No skill level determination is not applied for the task "1) Strategy planning for standardization".

Each level of skills for most tasks are briefly described by the 3 items of skill evaluation criteria on performance as shown in Table 2.

Table 2 Skill levels and evaluation criteria on performance

Level	Evaluation criteria on performance		
	Responsibility	Experience	Achievement
1	As an assistant	One or more experiences with support	Not necessary
2	As a person in charge	One or more experiences autonomously	One or more achievements
3	As a leader	Two or more experiences with leading	Two or more achievements

7 Skill card template

The following skill card template includes the core common descriptions for all skill card.

==Evaluation criteria on performance==

a) Responsibility

Achieved and/or experienced as personal in-charge

b) Experience

Achieved and/or experienced one or more of the following;

- 1)

c) Achievements

Achieved and/or experienced one or more of the following;

- 1) The achievement of operation indicated in the experience (including as individual and/or group. The same shall apply hereinafter): _____
- 2) The achievement indicated in the experience contents: _____
- 3) The achievement indicated in the experience contents: _____
- 4) The achievement indicated in the experience contents: _____
- 5) Appropriately proposed standardization strategy on own main item or the new development product.
- 6) The outcome of operation indicated in experience has eventually been referred by investors and/or shareholders.

d) Contribution

Achieved and/or experienced one or more of the following;

- 1) Conducted trainings or advised junior employees.
- 2) Created manual for assigned operations.
- 3) Taught any internal/external training seminar (including seminars or study sessions for public, children, university students, corporations, or industries).
- 4) Participated in internal/external committee as a member (including those of related industries and public offices).
- 5) Published a thesis based on assigned operations or standard.
- 6) Presented in an academic conference or an exhibition regarding assigned operations, product, or standard.
- 7) Composed or published documents (including newspapers, journals, and websites) regarding information (including information or interpretation regarding specification, information of compatibility, and personal operational experiences).
- 8) Provided know-how to internal/external related personnel based on personal operational experiences.

==Evaluation criteria on capability==

e) Business Comprehension

Satisfy two or more of the following;

- 1) Understand each division' s policy and differentiation within open and closed strategy among corporate strategy, business strategy, research and development strategy, and intellectual property strategy, and be able to understand minimally, explain, and apply positioning of personally assigned operations (including domestic, international, and industrial positioning and understanding merit and demerit of positioning) by referring to related standardization strategy.

2) Be able to understand, explain, and suggest how can personally assigned operations can contribute to corporate strategy, business strategy, research and development strategy, intellectual property strategy (including differentiation within open and closed strategy), and/or related standardization strategy.

f) Communication

Satisfy two or more of the following:

- 1) Be able to collect, share, and exchange information smoothly with related personnel from related internal division, domestic and international companies, and the industry.
- 2) Be able to understand explanation correctly provided by related personnel from internal related division, domestic and international companies, and the industry.
- 3) Be able to associate and cooperate with related personnel from internal related division, domestic and international companies, and the industry.
- 4) Be able to find collaborators and create a network among related personnel from internal related division, domestic and international companies, and the industry.
- 5) Be able to create a meeting report, break down other people's arguments, and explain how they affect internally to related personnel from internal related division, domestic and international companies, and the industry.

g) Negotiation

Satisfy two or more of the following:

- 1) Be able to make an appointment, set up a meeting, and provide an opportunity for a negotiation.
- 2) Be able to present self-opinion, explain self-argument, and convince.
- 3) Be able to draw other people's opinions or arguments.
- 4) Be able to understand a point of an argument and move an argument forward to agreement. Understand internal corporate guideline, prioritize comparable matters, and enable to judge situation for corporate merit and demerit perspective while understand and respect other people's opinion and/or position.

h) Planning

Satisfy following:

- 1) Find out finding operational issues from the current circumstance and finding out the original solution.

i) Leadership

Satisfy two or more of the following:

- 1) Recognize issues or problems of organization that one belongs including a company, a party, and a group, and be able to suggest operational direction (including raising awareness of related personnel, instructing related personnel, setting up a discussion opportunity, encouraging participants for active involvement and expression, and dealing appropriately with objections or counterarguments by separating arguments and save discussion and put it into an agenda of the next meeting)
- 2) Be able to suggest an unanimously agreeable goal by reviewing different opinions from a new view of perspective (including differences in relationships between each division and each division's strategy, and competition map, industrial activities, and national standardization policy of rival companies).
- 3) Respect related personnel's position and build trustworthy relationship with related personnel by following the direction.

j) Presentation

Satisfy two or more of the following:

- 1) Be able to understand referral contents of responsible operations (including subjective standard, discussion contents, conversation, questions, opinions, emails, phone calls, regulations, thesis, procedures, trends, examples, issues, and other related information) in an appropriate language (including technical terms) well enough so one can exchange information, and execute operations (including analysis and surveys).
- 2) In order to execute operations (exchange opinions with related personnel, share information, negotiation, reporting, creating a meeting summary, and emails), be able to explain (including making presentation documents) and convince in clear, simple, logical, plain, appropriate way with necessary written languages.
- 3) In order to execute operations (exchange opinions with related personnel, collect information, share information, negotiation, facilitate meetings, conversation, make a statement, phone calls, and presentation) be able to explain, present, and convince in a clear, simple, logical, plain, appropriate way with necessary spoken languages.

k) Technology

Satisfy the following:

- 1) Be able to understand and explain related technical fields of standardization strategy operations (including background, effect, influence, contents of technology, feature, self-developed technology, similar technology including technical terms, technical trends, and technical discussion, related technology, competitors' technology, under-development technology standard technology, technology dealt by IPR policy, and advantageousness), and execute operations.

l) Operation

Satisfy two or more of the followings including item 3;

- 1) Under proper time management, be able to understand and explain referral contents of operations (including information regarding governmental standardization agency, operational abstract to make a draft, IP related knowledge, law related knowledge including WTO/TBT arrangements, business model examples applying standardization or IP, internal policy, internal procedures, external procedures, trends, examples, and issues) and execute operations.
- 2) Be able to report contents of incidents when any of referral contents found incorrect in accordance with executing operations.
- 3) Be able to find out issues and guide to solutions in accordance with executing applicable operations.

m) Miscellaneous

Satisfy zero or more of the following:

- 1) ...

As for the skill card for task "1) Strategy planning for standardization" and skill cards of level 2 for all other tasks, the descriptions with underline show the difference from the template and the descriptions using subscript characters show deletion from the template. As for the skill cards of level 1 and level 3 for the tasks, the descriptions with bold characters shows addition to the corresponding skill card of level 2, and the description using subscript characters show deletion from the corresponding skill card of level 2.

8 Skill card

1) Strategy planning for standardization

Note 6 No skill level determination is not applied for this task 1).

===Evaluation criteria on performance===

a) Responsibility

Operated applicable operation as standardization personal in-charge

b) Experience

Achieved and/or experienced one or more of the following autonomously;

- 1) By considering the relationship with corporate strategy (including marketing strategy, brand strategy), R&D strategy, IP strategy (Including effective use of open/close strategy depending on the circumstance), review the proposed strategy, determine on standardization strategy, execute and manage.
- 2) By considering the relationship with corporate strategy (including marketing strategy, brand strategy), R&D strategy, IP strategy (Including effective use of open/close strategy depending on the circumstance), make a decision on conducting standardization or not.
- 3) By considering the relationship with corporate strategy (including marketing strategy, brand strategy), R&D strategy, IP strategy (Including effective use of open/close strategy depending on the circumstance), make a decision on selecting De facto, Forum/Consortium, or De jure.
- 4) By considering the relationship with corporate strategy (including marketing strategy, brand strategy), R&D strategy, IP strategy (Including effective use of open/close strategy depending on the circumstance), adapt business model which utilizes standard and make a decision on execution.
- 5) Participated standardization related conference.

c) Achievements

Achieved and/or experienced two or more of the following;

- 1) As a result of operation indicated in experience, contributed to corporate result with standardization activity. (Including those of individual and of group; this applies to the rest).
- 2) As a result of operation indicated in experience, appropriately managed the standardization division in the company
- 3) As a result of operation indicated in experience, positively influenced strategy of own company, industry, government and/or international standardization organization
- 4) The outcome of operations listed in the contents of "Experience" had been referred to by any investors and shareholders.

d) Contribution

Achieved and/or experienced one or more of the following;

1) Conducted trainings or advised junior employees.

2) Created manual for assigned operations.

1) Taught any internal/external training seminar (including seminars or study sessions for public, children, university students, corporations, or industries).

2) Participated in internal/external committee as a member (including those of related industries and public offices).

5) Published a thesis based on assigned operations or specification.

6) Presented in an academic conference or an exhibition regarding assigned operations, product, or specification.

3) Composed or published documents (including newspapers, journals, and websites) regarding information (including information or interpretation regarding specification, information of compatibility, and personal operational experiences).

4) Provided know-how to internal/external related personnel based on personal operational experiences.

===Evaluation criteria on capability===

e) Business Comprehension Skill

Satisfy all of the followings;

1) Understand each division' s policy and differentiation within open and closed strategy among Corporate strategy, business strategy, research and development strategy, and intellectual property strategy, and be able to understand, explain, and apply positioning of standardization-related operation throughout a whole organization including personally assigned operations on operation (including domestic, international, and industrial positioning and understanding merit and demerit of positioning) by referring to related standardization strategy.

2) Be able to understand, explain, and suggest how standardization-related operation throughout a whole organization including personally assigned operations can contribute to corporate strategy, business strategy, research and development strategy, and intellectual property strategy.

f) Communication

Fulfill all of the following;

1) Be able to collect, share, and exchange information smoothly with related personnel from related internal division, domestic and international companies, and the industry.

2) Be able to understand explanation correctly provided by related personnel from internal related division, domestic and international companies, and the industry.

3) Be able to associate and cooperate with related personnel from internal related division, domestic and international companies, and the industry.

4) Be able to find collaborators and create a network among related personnel from internal related division, domestic and international companies, and the industry.

5) Be able to create a meeting report, break down other people' s arguments, and explain how they affect internally to related personnel from internal related division, domestic and international companies, and the industry.

g) Negotiation

Satisfy all of the following;

1) Be able to make an appointment and set up a meeting (and provide an opportunity for a negotiation by making appointment as off-line).

2) Be able to present self-opinion, explain self-argument, and convince.

3) Be able to draw other people' s opinions or arguments.

4) Be able to understand a point of an argument and move an argument forward to agreement. Understand internal corporate guideline, prioritize comparable matters, and enable to judge situation for corporate merit and demerit perspective while understand and respect other people' s opinion and/or position.

h) Planning

Satisfy all of the following;

1) Find out issues from the current situation (including the positioning from overall perspective) and be able to provide one or more own solutions (including direction)

i) Leadership

Satisfy all of the following;

1) Recognize issues or problems of organization that one belongs and be able to suggest operational direction (including raising awareness of related personnel, instructing related personnel, setting up a discussion opportunity, encouraging participants for active involvement and expression, and dealing appropriately with objections or counterarguments by separating arguments and save discussion and put it into an agenda of the next meeting)

2) Be able to suggest an unanimously agreeable goal by reviewing different opinions from a new view of perspective (including differences in relationships between each division and each division' s strategy, and competition map, industrial activities, and national standardization policy of rival companies).

3) Respect related personnel' s position and build trustworthy relationship with related personnel by following the direction.

j) Presentation

Satisfy all of the following;

1) Be able to understand referral contents of responsible operations (including subjective standard, discussion contents, conversation, questions, opinions, emails, phone calls, regulations, thesis, procedures, trends, examples, issues, and other related information) in an appropriate language (including technical terms) well enough so one can exchange information, and execute operations.

2) In order to execute responsible operations (exchange opinions with related personnel, share information, negotiation, reporting, creating a meeting summary, and emails),

be able to explain (including making presentation documents) and convince in clear, simple, logical, plain, appropriate way with necessary written languages.
3) In order to execute responsible operations (exchange opinions with related personnel, collect information, share information, negotiation, facilitate meetings, conversation, make a statement, phone calls, and presentation) be able to explain, present, and convince in a clear, simple, logical, plain, appropriate way with necessary spoken languages.

k) Technology

Satisfy **all of** the following;

1) Be able to understand and explain related technical fields of assigned operations (including background, effect, influence, contents of technology, feature, self-developed technology, similar technology including technical terms, technical trends, and technical discussion, related technology, competitors' technology, under-development technology standard technology, IPR, technology dealt by policy, and advantageousness), and execute operations.

l) Operation

Satisfy **all of** the following;

1) Under proper time management, be able to understand and explain the knowledge and information i.e. referred contents are own company policy, procedure, tendency, business case and issues, on assigned operations and execute operations.

2) Be able to report contents of incidents when any of referral contents found incorrect in accordance with executing operations.

3) Be able to find out issues and guide to solutions in accordance with executing applicable operations.

m) Miscellaneous

Satisfy zero or more of the following;

1) Have an interest, concern, or curiosity for products, technology, and different culture.

2) Be understanding of different culture including history and religion, other corporations, and associated corporations.

2) Information collecting/analyzing/evaluating and tactics planning

2-1) Level 1

=== Evaluation criteria on performance ===

a) Responsibility

Supported as an **assistant (such as a committee member of an in-house committee, those who served on the committee of national standardization organizations, or who participated in the international standardization organizations or its equivalent institutions with a leader)**.

b) Experience

Achieved and/or experienced **one or more of the following under a leader**.

1) Conducted surveys on related standard specifications, and **reported** trends of related organizations (including companies, countries and industries) for one or more deliberation for standardization strategy for one' s company, a country, and/or an industry.

2) Understanding trends in 1) and conducted one of the following: confirming positioning of one' s company, analyzing advantageousness, and finding out issues (including technology aspects, user aspects, accessibility, market expansion, and industrial influencers).

3) Based on research results and/or issues, consulted related divisions (including divisions of planning, technology, quality, intellectual property, and environment).

4) Understand domestic and international situation (including attending meetings of industry associations and research on overseas trends) and **reported** one or both of the outlines of a proposed possible standardization strategy or issues.

c) Achievement (Optional)

Achieved and/or experienced zero or more of the following;

1) Influenced company' s direction for product development resulting from operations listed in the contents of "Experience" (including those of individual and of group. This applies to the rest).

2) Clarified company' s positioning resulting from operations listed in the contents of "Experience."

3) Influenced other company' s standardization strategy resulting from operations listed in the contents of "Experience."

4) Expanded market size and/or share of applicable business or technology resulting from operations listed in the contents of "Experience."

5) Had internal/external related personnel understand positive and negative influences and effects of a product lifecycle resulting from operations listed in the contents of "Experience."

6) Proceeded operations listed in the contents of "Experience" on self-developed main products or under-development products.

7) The outcome of operations listed in the contents of "Experience" had been referred to by any executives and shareholders.

d) Contribution

Achieved and/or experienced one or **more** of the following. ¹⁾ Conducted trainings or advised junior employees

1) Created manual for assigned operations.

2) Taught any internal/external training seminar (including seminars or study sessions for public, children, university students, corporations, or industries).

3) Participated in internal/external committee as a member (including those of related industries and public offices).

4) Published a thesis based on assigned operations or standard.

5) Presented in an academic conference or an exhibition regarding assigned operations, product, or standard.

6) Composed or published documents (including newspapers, journals, and websites) regarding information (including information or interpretation regarding specification, information of compatibility, and personal operational experiences).

⁸⁾ Provided know-how to internal/external related personnel based on personal operational experiences.

=== Evaluation criteria on capability ===

e) Business Comprehension

Satisfy **all of** the following;

1) Understand each division' s policy and differentiation within open and closed strategy among corporate strategy, business strategy, research and development strategy, and intellectual property strategy, and be able to understand minimally, explain, and apply positioning of personally assigned operations (including domestic, international, and industrial positioning and understanding merit and demerit of positioning) by referring to related standardization strategy.

²⁾ Be able to understand, explain, and suggest how can personally assigned operations can contribute to corporate strategy, business strategy, research and development strategy, intellectual property strategy (including differentiation within open and closed strategy), and/or related standardization strategy.

f) Communication

Satisfy **one or more** of the following;

1) Be able to collect, share, and/or exchange information smoothly with related personnel (including leaders, internal related division, other domestic companies, and/or representatives of industries).

2) Be able to explain simply to related personnel (including leaders and internal related division).

3) Be able to understand explanation correctly provided by related personnel (including leaders, internal related division, other domestic companies, and/or representatives of industries).

4) Be able to associate and cooperate with related personnel (including leaders and internal related division).

⁵⁾ Be able to find collaborators and create a network among related personnel.

g) Negotiation

Satisfy **one or more** of the following:

- 1) Be able to make an appointment and set up a meeting for a negotiation.
- 1) Be able to present self-opinion, explain self-argument, and convince.
- 2) Be able to understand a point of an argument and move an argument forward to agreement. Understand internal corporate guideline and prioritize comparable matters while understand and respect other people's opinion and/or position.

h) Planning

Satisfy all of the following:

- 1) **Under a leader**, be able to find out issues from collected information, research results, and advantageousness of technology, and provide one's own solution.

i) Leadership

Satisfy **one or more** of the following:

- 1) Be able to recognize issues or problems of organization that one belongs (including a company, a party, and a group) and be able to suggest operational direction (including raising awareness of related personnel, instructing related personnel, setting up a discussion opportunity, encouraging participants for active involvement and expression, and dealing appropriately with objections or counterarguments by separating arguments and save discussion and put it into an agenda of the next meeting).
- 2) Be able to suggest an unanimously agreeable goal by reviewing different opinions from a new view of perspective (including differences in relationships between each division and each division's strategy and rival companies of competition mapping, industrial activities, and national standardization policy).
- 3) Respect related personnel's position and build trustworthy relationship with related personnel by following the direction.

j) Presentation

Satisfy **one or more** of the following:

- 1) Be able to understand referral contents of operations (including subjective standard, discussion contents, conversation, questions, opinions, emails, phone calls, regulations, thesis, procedures, trends, examples, issues, and other related information) in an appropriate language (including technical terms) well enough so one can exchange information, and execute operations (including analysis and surveys).
- 2) In order to create a specification, be able to reflect intentions in accordance with necessary rules (including directives) and with necessary languages.
- 3) In order to execute operations (exchange opinions with related personnel, share information, negotiation, reporting, creating a meeting summary, and emails), be able to explain (including making presentation documents) and convince in clear, simple, logical, plain, appropriate way with necessary written languages.

3) In order to execute operations (exchange opinions with related personnel, collect information, share information, negotiation, facilitate meetings, conversation, make a statement, phone calls, and presentation) be able to explain, present, and convince in a clear, simple, logical, plain, appropriate way with necessary spoken languages.

k) Technology

Satisfy all of the following:

- 1) Be able to understand minimally and explain related technical fields of standardization strategy operations (including background, effect, influence, contents of technology, feature, self-developed technology, similar technology including technical terms, technical trends, and technical discussion, related technology, competitors' technology, under-development technology standard technology, technology dealt by IPR policy, and advantageousness), and execute operations.

l) Operation

Satisfy **two or more (must include "3")** of the following:

- 1) Under proper time management, be able to understand minimally and explain referral contents of operations (including information regarding governmental standardization agency, operational abstract to make a draft, IP related knowledge, law related knowledge including WTO/TBT arrangements, business model examples applying standardization or IP, internal policy, internal procedures, external procedures, trends, examples, and issues) and execute operations.
- 2) Be able to report contents of incidents when any of referral contents found incorrect in accordance with executing operations.
- 3) Under a leader, be able to find out issues and guide to solutions in accordance with executing applicable operations.

m) Miscellaneous (Optional)

Satisfy **zero or more** of the following:

- 1) Have an interest, concern, or curiosity for products, technology, different culture, and other corporations and industries.
- 2) Be understanding of different culture including history and religion, other corporations, and associated corporations.

2-2) Level 2

=== Evaluation criteria on performance ===

a) Responsibility

Operated as a **representative** (served as a committee of the international standardization organization or its equivalent institution).

b) Experience

Achieved and/or experienced **one or more of the following autonomously**. 1) Conducted surveys on related standard specifications, and understood trends of related organizations (including companies, countries, industries) for one or more deliberation for standardization strategy for one's company, a country, and/or an industry.

2) Understanding trends in "1" and conducted one of the following: confirming positioning of one's company, analyzing advantageousness, and finding out issues (including technology aspects, user aspects, accessibility, market expansion, and industrial influencers).

3) Based on research results and/or issues, consulted related divisions (including divisions of planning, technology, quality, intellectual property, and environment), adjusted, and acquired their understanding.

4) Understand domestic and international situation (including attending meetings of industry associations and research on overseas trends) and **recognized** one or both of the outlines of a proposed possible standardization strategy or issues.

5) Understand a domestic and international situation, adjusted in accordance with relevant divisions, and modified the outline of a standardization strategy draft.

6) Created standardization strategy draft given the condition that satisfies at least one of the steps "1" to "5" above.

c) Achievement

Achieved and/or experienced **one or more** of the following:

- 1) Influenced company's direction for product development resulting from operations listed in the contents of "Experience" (including those of individual and of group. This applies to the rest).
- 2) Clarified company's positioning resulting from operations listed in the contents of "Experience."
- 3) Influenced other company's standardization strategy resulting from operations listed in the contents of "Experience."
- 4) Expanded market size and/or share of applicable business or technology resulting from operations listed in the contents of "Experience."
- 5) Had internal/external related personnel understand positive and negative influences and effects of a product lifecycle resulting from operations listed in the contents of "Experience."
- 6) Proceeded operations listed in the contents of "Experience" on self-developed main products or under-development products.
- 7) The outcome of operations listed in the contents of "Experience" had been referred to by any executives and shareholders.

d) Contribution

Achieved and/or experienced **one or more** of the following:

- 1) Conducted trainings or advised junior employees
- 2) Created manual for assigned operations.

- 3) Taught any internal/external training seminar (including seminars or study sessions for public, children, university students, corporations, or industries).
- 4) Participated in internal/external committee as a member (including those of related industries and public offices).
- 5) Published a thesis based on assigned operations or specification.
- 6) Presented in an academic conference or an exhibition regarding assigned operations, product, or specification.
- 7) Composed or published documents (including newspapers, journals, and websites) regarding information (including information or interpretation regarding specification, information of compatibility, and personal operational experiences).
- 8) Provided know-how to internal/external related personnel based on personal operational experiences.

== Evaluation criteria on capability ==

e) Business Comprehension

Satisfy **all** of the following;

- 1) Understand each division's policy and differentiation within open and closed strategy among corporate strategy, business strategy, research and development strategy, and intellectual property strategy, and be able to understand, explain, and apply positioning of personally assigned operations (including domestic, international, and industrial positioning and understanding merit and demerit of positioning) by referring to related standardization strategy.
- 2) Be able to understand, explain, and suggest how can personally assigned operations can contribute to corporate strategy, business strategy, research and development strategy, intellectual property strategy (including differentiation within open and closed strategy), and/or related standardization strategy.

f) Communication

Satisfy **two or more** of the following;

- 1) Be able to collect, share, and exchange information smoothly with related personnel (including internal related division, other domestic and international companies, and/or representatives of industries).
- 2) Be able to create a meeting summary, break down other people's arguments, and explain how they affect internally to related personnel (including internal related division, other domestic and international companies, and/or representatives of industries)
- 3) Be able to understand explanation correctly provided by related personnel (including internal related division, other domestic and international companies, and/or representatives of industries).
- 4) Be able to associate and cooperate with related personnel from internal related division, other domestic and international companies, and/or representatives of industries).
- 5) Be able to find collaborators and create a network among related personnel (including internal related division, other domestic and international companies, and/or representatives of industries).

g) Negotiation

Satisfy **two or more** of the following;

- 1) Be able to make an appointment and set up a meeting for a negotiation.
- 2) Be able to present self-opinion, explain self-argument, and convince.
- 3) Be able to draw other people's opinions or arguments.
- 4) Be able to understand a point of an argument and move an argument forward to agreement. Understand internal corporate guideline, prioritize comparable matters, and enable to judge situation for corporate merit and demerit perspective while understand and respect other people's opinion and/or position.

h) Planning

Satisfy **all** of the following;

- 1) Find out issues from collected information, research results, and advantageousness of technology, and be able to provide one or more own solutions including standardization tactics and standardization strategy planning upon consideration of merit and demerit when standardization is applied.

i) Leadership

Satisfy **all** of the following;

- 1) Recognize issues or problems of organization that one belongs (including a company, a party, and a group) and be able to suggest operational direction (including raising awareness of related personnel, instructing related personnel, setting up a discussion opportunity, encouraging participants for active involvement and expression, and dealing appropriately with objections or counterarguments by separating arguments and save discussion and put it into an agenda of the next meeting).
- 2) Be able to suggest an unanimously agreeable goal by reviewing different opinions from a new view of perspective (including differences in relationships between each division and each division's strategy and rival companies of competition mapping, industrial activities, and national standardization policy).

3) Respect related personnel's position and build trustworthy relationship with related personnel by following the direction.

j) Presentation

Satisfy **two or more** of the following;

- 1) Be able to understand referral contents of operations (including subjective standard, discussion contents, conversation, questions, opinions, emails, phone calls, regulations, thesis, procedures, trends, examples, issues, and other related information) in an appropriate language (including technical terms) well enough so one can exchange information, and execute operations (including analysis and surveys).
- 2) In order to create a specification, be able to reflect intentions in accordance with necessary rules (including directives) and with necessary languages.
- 3) In order to execute operations (exchange opinions with related personnel, share information, negotiation, reporting, creating a meeting summary, and emails), be able to explain (including making presentation documents) and convince in clear, simple, logical, plain, appropriate way with necessary written languages.
- 4) In order to execute operations (exchange opinions with related personnel, collect information, share information, negotiation, facilitate meetings, conversation, make a statement, phone calls, and presentation) be able to explain, present, and convince in a clear, simple, logical, plain, appropriate way with necessary spoken languages.

k) Technology

Satisfy **all** of the following;

- 1) Be able to understand and explain related technical fields of standardization strategy operations (including background, effect, influence, contents of technology, feature, self-developed technology, similar technology including technical terms, technical trends, and technical discussion, related technology, competitors' technology, under-development technology standard technology, technology dealt by IPR policy, and advantageousness), and execute operations.

l) Operation

Satisfy **two or more (must include "3")** of the following;

- 1) Under proper time management, be able to understand and explain referral contents of operations (including information regarding governmental standardization agency, operational abstract to make a draft, IP related knowledge, law related knowledge including WTO/TBT arrangements, business model examples applying standardization or IP, internal policy, internal procedures, external procedures, trends, examples, and issues) and execute operations.
- 2) Be able to report contents of incidents when any of referral contents found incorrect in accordance with executing operations.
- 3) Be able to find out issues and guide to solutions in accordance with executing applicable operations.

m) Miscellaneous (Optional)

Satisfy **zero or more** of the following;

- 1) Have an interest, concern, or curiosity for products, technology, different culture, and other corporations and industries.
- 2) Be understanding of different culture including history and religion, other corporations, and associated corporations.

2-3) Level 3

=== Evaluation criteria on performance ===

a) Responsibility

Operated as a **leader** (served as a official post of the international standardization organization or its equivalent institution).

b) Experience

Achieved and/or experienced **two or more of the following with leading**:

- 1) Conducted surveys on related standard specifications, and understood trends of related organizations (including companies, countries, industries) for one or more deliberation for standardization strategy for one' s company, a country, and/or an industry.
- 2) Understanding trends in "1)" and conducted one of the following: confirming positioning of one' s company, analyzing advantageousness, and finding out issues (including technology aspects, user aspects, accessibility, market expansion, and industrial influencers).
- 3) Based on research results and/or issues, consulted related divisions (including divisions of planning, technology, quality control, intellectual property, and environment), adjusted, and acquired their understanding.
- 4) Understand domestic and international situation (including attending meetings of industry associations and research on overseas trends) and **recognized** one or both of the outlines of a proposed possible standardization strategy or issues.
- 5) Understand a domestic and international situation, adjusted in accordance with relevant divisions, and modified the outline of a standardization strategy draft.
- 6) Created standardization strategy draft given the condition that satisfies at least one of the steps "1)" to "5)" above.

c) Achievement

Achieved and/or experienced **two or more** of the following:

- 1) Influenced company' s direction for product development resulting from operations listed in the contents of "Experience" (including those of individual and of group. This applies to the rest).
- 2) Clarified company' s positioning resulting from operations listed in the contents of "Experience."
- 3) Influenced other company' s standardization strategy resulting from operations listed in the contents of "Experience."
- 4) Expanded market size and/or share of applicable business or technology resulting from operations listed in the contents of "Experience."
- 5) Had internal/external related personnel understand positive and negative influences and effects of a product lifecycle resulting from operations listed in the contents of "Experience."
- 6) Proceeded operations listed in the contents of "Experience" on self-developed main products or under-development products.
- 7) The outcome of operations listed in the contents of "Experience" had been referred to by any executives and shareholders.

d) Contribution

Achieved and/or experienced **two or more** of the following:

- 1) Conducted trainings or advised junior employees
- 2) Created manual for assigned operations.
- 3) Taught any internal/external training seminar (including seminars or study sessions for public, children, university students, corporations, or industries).
- 4) Participated in internal/external committee as a member (including those of related industries and public offices).
- 5) Published a thesis based on assigned operations or specification.
- 6) Presented in an academic conference or an exhibition regarding assigned operations, product, or specification.
- 7) Composed or published documents (including newspapers, journals, and websites) regarding information (including information or interpretation regarding specification, information of compatibility, and personal operational experiences).
- 8) Provided know-how to internal/external related personnel based on personal operational experiences.

=== Evaluation criteria on capability ===

e) Business Comprehension

Satisfy all of the followings:

- 1) Understand each division' s policy and differentiation within open and closed strategy among Corporate strategy, business strategy, research and development strategy, and intellectual property strategy, and be able to understand, explain, and apply positioning of standardization-related **operation throughout a whole organization including personally assigned operations** (including domestic, international, and industrial positioning and understanding merit and demerit of positioning) by referring to related standardization strategy.
Be able to understand, explain, and suggest how standardization-related operation throughout **a whole organization including personally assigned operations** can contribute to corporate strategy, business strategy, research and development strategy, and intellectual property strategy.

f) Communication

Fulfill all of the following:

- 1) Be able to collect, share, and exchange information smoothly with related personnel from related internal division, domestic and international companies, and the industry.
- 2) Be able to understand explanation correctly provided by related personnel from internal related division, domestic and international companies, and the industry.
- 3) Be able to associate and cooperate with related personnel from internal related division, domestic and international companies, and the industry.
- 4) Be able to find collaborators and create a network among related personnel from internal related division, domestic and international companies, and the industry.
- 5) Be able to create a meeting report, break down other people' s arguments, and explain how they affect internally to related personnel from internal related division, domestic and international companies, and the industry.

g) Negotiation

Satisfy all of the following:

- 1) Be able to make an appointment, set up a meeting, and provide an opportunity for a negotiation.
- 2) Be able to present self-opinion, explain self-argument, and convince.
- 3) Be able to draw other people' s opinions or arguments.
- 4) Be able to understand a point of an argument and move an argument forward to agreement. Understand internal corporate guideline, prioritize comparable matters, and enable to judge situation for corporate merit and demerit perspective while understand and respect other people' s opinion and/or position.

h) Planning

Satisfy all of the following:

- 1) Find out issues from collected information, research results, and advantageousness of technology **with leading**, and be able to provide one or more own solutions including standardization tactics and standardization strategy planning upon consideration of merit and demerit when standardization is applied.

i) Leadership

Satisfy all of the following:

- 1) Recognize issues or problems of organization that one belongs including a company, a party, and a group, and be able to suggest operational direction (including raising awareness of related personnel, instructing related personnel, setting up a discussion opportunity, encouraging participants for active involvement and expression, and dealing appropriately with objections or counterarguments by separating arguments and save discussion and put it into an agenda of the next meeting), **manage and control progress of a project, and evaluate.**
- 2) Be able to suggest an unanimously agreeable goal by reviewing different opinions from a new view of perspective (including differences in relationships between each division and each division' s strategy, and competition map, industrial activities, and national standardization policy of rival companies).
- 3) **Respect related personnel' s position and build trustworthy relationship with related personnel by following the direction.**

j) Presentation

Satisfy all of the following;

- 1) Be able to understand referral contents of operations (including subjective standard, discussion contents, conversation, questions, opinions, emails, phone calls, regulations, thesis, procedures, trends, examples, issues, and other related information) in an appropriate language (including technical terms) well enough so one can exchange information, and execute operations (including analysis and surveys).
- 2) In order to create a specification, be able to reflect intentions in accordance with necessary rules (including directives) and with necessary languages.
- 3) In order to execute operations (exchange opinions with related personnel, share information, negotiation, reporting, creating a meeting summary, and emails), be able to explain (including making presentation documents) and convince in clear, simple, logical, plain, appropriate way with necessary written languages.
- 4) In order to execute operations (exchange opinions with related personnel, collect information, share information, negotiation, facilitate meetings, conversation, make a statement, phone calls, and presentation) be able to explain, present, and convince in a clear, simple, logical, plain, appropriate way with necessary spoken languages.

k) Technology

Satisfy all of the following;

- 1) Be able to understand and explain related technical fields of standardization strategy operations (including background, effect, influence, contents of technology, feature, self-developed technology, similar technology including technical terms, technical trends, and technical discussion, related technology, competitors' technology, under-development technology standard technology, IPR, technology dealt by policy, and advantageousness), **apply** to operations based on comprehension, and execute operations.

l) Operation

Satisfy all of the following;

- 1) Under proper time management, be able to understand and explain referral contents of operations (including information regarding governmental standardization agency, operational abstract to make a draft, IP related knowledge, law related knowledge including WTO/TBT arrangements, business model examples applying standardization or IP, internal policy, internal procedures, external procedures, trends, examples, and issues), apply to operations based on comprehension, and execute operations.
- 2) Be able to report contents of incidents when any of referral contents found incorrect in accordance with executing operations.
- 3) Be able to find out issues and **guide to solutions (be able to instruct subordinate personnel)** in accordance with executing applicable operations.

m) Miscellaneous (Optional)

Fulfill **zero or more** of the following;

- 1) Have an interest, concern, or curiosity for products, technology, different culture, and other corporations and industries.
- 2) Be understanding of different culture including history and religion, other corporations, and associated corporations.

3) Supervising (Strategy)

through

36) Considering intellectual properties

are omitted by page restrictions.

Annex A (informative) Application

A.1 Various applications

A.1.1 Use for a corporation

a) Understanding of existing skill

The skill standard can be used to apprehend and describe present situation of standardization human resource. An example of the use case: Evaluating the skills of three members in our standardization group by using the skill cards of the task "11) Developing associated technology", two of them had a skill of level 1, the other level 2.

b) Setting a target of education

The skill standard can be used to set a target of education for standardization human resource. An example of the use case: Our corporation introduced the strategy to develop international standards based on our corporate specifications. Therefore, skills of all the members in our standardization group regarding the task 11) defined by the skill standard should be level 3. To do so, the goal for the member with skill level 2 should be set to level 3, and the goal for the members with skill level 1 should be set to level 3 within 2 years through an OJT.

c) Evaluating effects of education

The skill standard can be used to evaluate effects of the actual education with the target. An example of the use case: The member with skill level 2 was confirmed to have reached his goal of level 3 by evaluating his skill using the corresponding skill card. The two members with skill level 1 were still below the level 2. It is difficult to raise the level in a short time through only an OJT, we should conduct an OffJT using external training programs targeting skill level 2.

d) Collecting standardization human resource

The skill standard can be used to collect standardization human resources by informing, for example, that a position is open for person who has a skill of level 2 and above for the task "30) Liaison establishing (Promotion)" defined by the skill standard.

e) Re-allocating standardization human resource

The skill standard can be used to re-allocate standardization human resource. An example of the use case: Evaluating skill levels of all the standardization human resources in the distributed companies, it was found that members with high skill levels were concentrated in a business company. It will be possible to help raising skill levels of all the companies by combining re-allocation of human resource and OJT.

f) Explaining tasks of standardization

The skill standard can be used to explain tasks of standardization. An example of the use case: To explain the kinds of tasks of standardization and the required skill levels, the handout was created for the company executives or human resource department, referring to the skill standard.

g) Development of education programs or materials for standardization human resource

The skill standard can be used for development of education programs or materials for standardization human resource in education organizations including a university. An example of the use case: This training program is for students of the skill level 2 for the task "15) Drafting standards (De jure standards)" defined in the skill standard.

A.1.2 Use for a person

a) Career development

The skill standard can be used for career development of a person. An example of the use case: By self evaluation based on the skill standard, I found I have a skill of level 3 for the task "16) Drafting standards

(Forum/Consortium standards)", and a skill of level 1 for the task "2) Information collecting/analyzing/evaluating and tactics planning". Since my company adopted recently the strategy to promote consortium standards, I would like to voluntarily raise my skill level for the task 2) to level 2. I will find what I shall do next in accordance with the skill standard.

A.2 Guideline to introduction

A.2.1 Extraction of the necessary tasks

The skill standard covers so much extensive tasks for standardization that it may include tasks which are not necessary for some corporations. Therefore it is recommended to extract only the required tasks for standardization from the Table 1 and use only the corresponding skill cards for the corporation.

A.2.2 Customization of skill cards

Some items of skill evaluation criteria include a choice, indicating for example "A, B, or C". Unnecessary choice can be deleted for customization, indicating for example "A or C".

Regarding example items described as "... etc", a customization can be done by replacing it with an equivalent item. Regarding an option item described as "zero or more", a customization can be done by deleting it,

A.3 FAQ

a) Question 1

[Q] The skill standard defines that the lowest skill level is level 1. How shall we deal with much lower skill level?

[A] There is no level lower than level 1 in this skill standard. If you have experienced one of the items listed, your skill can be classified to level 1 even without any achievement. It is a rarely seen case that the skill level 1 cannot be applied.

b) Question 2

[Q] If one has no achievement, is it impossible to apply the skill level 2 or 3?

[A] If one will surely have an achievement in the near future, he may be dealt with as having an achievement.

Annex B (informative) Judging a skill

As an example of judging a skill, let us discuss a skill level of an employee in a corporation that has a plan for him to engage in the task of "12) Proposing new work items (De jure standards)".

His (the employee's) profiles are:

- 1) Based on the e-book specification developed in his corporation,
- 2) he submitted an NP to a TC (Technical Committee) of IEC, and
- 3) got a successful result in the NP ballot, and
- 4) created a draft international standard of the e-book as a project leader.

In those works he conducted following activities:

- 5) Understanding the corporate strategy, business strategy, intellectual property strategy and his position in the business, and referring to associated standardization strategy, he explained his activity plan to members in his division and was approved by his division director.
- 6) He provided an appropriate disposition to the comments of national committees on the NP ballot..
- 7) Before submitting the NP, he explained the proposal to members of associated domestic committees to get their agreements on the submission.
- 8) Before submitting the NP, he explained the proposal to associated members of the international committees

to acquaint them with the submission.

9) He submitted his paper for his works of drafting the international standard to a domestic academic institute and made a presentation of the abstract of his paper.

Reviewing the profiles in accordance with items of the skill evaluation criteria for level 2 of the task "12) Proposing new work items (De jure standards)" as shown below, it is clear that he has a skill of level 2 for the task 12). However he has not yet experienced the final ballot for publishing the international standard. Therefore, it is not yet confirmed that he has the capabilities required by items i) Leadership and l) Operation of the skill evaluation criteria.

==Evaluation criteria on performance==

a) Responsibility

He is in charge of a project leader of a TC of IEC.

b) Experience

He submitted an NP and drafted an international standard being based on the specification developed in his corporation.

c) Achievement

The NP was accepted and the project for standardization was established.

d) Contribution

He made a presentation on the draft standard at a domestic academic institute.

==Evaluation criteria on capability==

e) Business Comprehension

Understanding the corporate strategy, business strategy, intellectual property strategy and his position in the business, and referring to associated standardization strategy, he explained his activity plan to members in his division and was approved by his division director.

f) Communication and g) Negotiation

Before submitting the NP, he explained the proposal to members of associated domestic committees to get their agreements on the submission.

Before submitting the NP, he explained the proposal to associated members of the international committees to acquaint them with the submission.

h) Planning and i) Leadership

For establishing a project for standardization, he made an appropriate disposition of the comments on the NP ballot.

j) Presentation, k) Technology and l) Operation

After the preliminary discussions in associated committees, he led the NP to a successful result and established a project to draft his international standard.