19th TRIZ Future Conference (TFC2019)
Held by European TRIZ Association (ETRIA),
at ENSA Marrakech, Morocco
on Oct. 9 - 11, 2019

World TRIZ Sites Project (WTSP) (2):

To Build Catalogs of TRIZ-Related Web Sites in the World

Oct. 10, 2019

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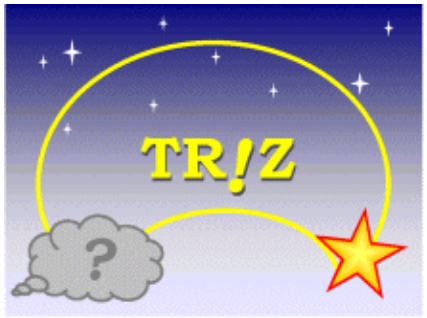

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[1] WTSP Project: Aims and Pilot Project in Japan

[1A] Aims of WTSP

(2018.10.29 TFC2018)

- **To build Catalogs of TRIZ-related Sites**
  - **of each country** (in their own language, then in English) and
  - **of the whole world** (in English, then in many languages)
  - with appropriate (brief but close) **introduction of individual sites**
  - with **appropriate selection** of (useful and important) sites
  - **for various people** (unfamiliar, beginners, users, and experts in TRIZ)
  - in the field of **TRIZ and relevant methodologies**
  - as **reliable sources of information** (on theories, applications, activities)
- **To keep the Catalogs up-to-date**
  - accepting new and revised information regularly
  - revising all the Catalogs every two years

Bottom-up Strategy

- **For promoting TRIZ and relevant methodologies further in the world**
- **By voluntary collaboration of many TRIZ colleagues in the world**

[1B] Pilot project in Japan: Japan WTSP Catalog (Apr. 2018)

(1) Selected the Search Engine and its options:

Yahoo!.Japan is selected, with the options of
Keyword = 'TRIZ', Location = 'Japan', Language = 'Japanese, English',
Displaying only one main page of each site + URL for site internal search.

(2) Visited individual sites one by one and described introductions to them:

400 Sites were hit. Visiting them one by one, 70 sites were found significant.
Reading main articles, site's structure, contents, nature, quality, etc. are found.
Introductions of individual sites were written in 3-10 lines in a free format.

(3) Added relevant sites around TRIZ, using background knowledge

20 sites of significant importance were added, resulting in 92 sites in total.

(4) Japan WTSP Catalog of 92 TRIZ-related sites was compiled in Japanese

Classifying them with types (or roles) of the sites, and arranged in an appropriate order.
2/3 of the sites are found new since the annotated list in 2008.

(5) Japan WTSP Catalog (in English) was posted publicly. (Apr. 2018)

92 sites in total, including 24 Selected sites.

(6) Revised into "World WTSP Catalog (Japan Part)" (Jul. 2019)

Re-evaluates with World WTSP Criteria: ◎ 1 site, ○ 8 sites, □ 17 sites.:

[1C] World WTSP Catalogs (Japan Part) (TN, Jul. 13, 2019)

Japan TRIZ Sites

◎ 01 TRIZ Home Page in Japan (Toru Nakagawa)

○ 03 Japan TRIZ Society (NPO)
○ 09 IDEA Corp. (Mamoru Zenko)
○ 10 MOST LLC (Kazuya Yamaguchi)
○ 12 Ideation Japan Ltd. (Teruyuki Kamimura)
○ 14 TRIZ Study (Shinsuke Kurosawa)
○ 18 Monodukuri.com (Osamu Kumasaka)

☐ 02 (Former) Japan TRIZ CB
☐ 07 Cybernet System Co., Ltd.
☐ 16 Pro-Engineers (Shigeru Kasuya)
☐ 17 Idea Plant (Rikie Ishii)
☐ 29 MEMODAS (Kimihiko Hasegawa)

Japan Around-TRIZ Sites

○ 36 Idea Marathon Institute (Takeo Higuchi)

☐ 19 J-STAGE (JST)
☐ 24 Daiichi Kousha (Akihiro Katahira)
☐ 37 Netman (Ken-ichi Nagaya)
☐ 39 JST (Japan Science and Technology Agency)
☐ 40 NEDO (New Energy and Industrial Technology Development Organization)
☐ 42 Japan Creativity Society
☐ 43 JUSE (Union of Japanese Scientists & Engineers)
☐ 44 JSQC (Japanese Society for Quality Control)
☐ 45 SJVE (Society of Japan Value Engineering)
☐ 48 JIII (Japan Institute of Invention and Innovation)
☐ 58 JAIST (Japan Advanced Institute of Science & Tech.)
☐ 59 i.school, The University of Tokyo
☐ 60 Keio SDM, Keio University Graduate School

[2] Bottom-up Approaches in Individual Countries

[2A] Our Strategy and Its Difficulty

We often sent Appeals to many TRIZ colleagues:

(a) In each country, to form a team of voluntary members with a Country Editor.

(b) To survey TRIZ-related sites and describe introduction to them one by one.

(c) To build the WTSP Catalog of TRIZ-related sites in each country

Many people supported and joined WTSP but very few actually worked.

(In Oct. 2018, we had 30+ Members and 40+ signed to become Members.)

(a) Because Talented, active persons are always too busy.

Our solution ==> Divide the tasks into smaller jobs for easier handling.
Many jobs can be done individually in parallel.

(b) Because the image of the final output of WTSP is not clear.

(c) Because the results of Internet surveys are voluminous, messy and insufficient.

(d) Because the practical process of achieving the jobs is not clear.

(e) Because getting the coordinator (Country Editor) is difficult.

[2B] Bottom-up Activities

Bottom-up Strategy

'18 Sept. Internet surveys for TRIZ related sites in 33+ countries.
50 - 100 sites/country. (Nakagawa)

'18 Oct. Presentation at ETRIA TFC 2018. Invitation to WTSP.

'18 Nov. Set the Plan: "Complete World WTSP Catalog and report it at TFC2019"

'18 Dec. Due: To form WTSP Teams in each country -- Almost no progress

'19 Mar. Due: To build Country WTSP Catalog by visiting & describing TRIZ sites..
--- Almost no progress

Surveys for TRIZ sites in the world in 5 major languages. (Nakagawa)

'19 Jun. **Manuscripts from Malaysia (Eng Hoo Tan) and China (Runhua Tan)**

'19 Jul. WTSP Practice Guide, World WTSP Catalogs (Japan Part). (Nakagawa)

'19 Jul. **Manuscripts of Russian language sites (Michael Orloff, N. Shpakovsky)**

'19 Aug, **WTSP World TRIZ Sites Basic Catalog (Preliminary version)** (Nakagawa)

[2C] WTSP Practice Guide (for Teams in countries) (Jul., 2019)

(1) Any person who understands the significance of the WTSP Project may voluntarily join WTSP as a member.

We should get as many voluntary members as possible.
In each country, we should form a Team having a coordinator (WTSP Country Editor).

(2) List up Web sites related to TRIZ in each country.

First we should just list up known and recommendable TRIZ-related sites.
Show the list openly to the Team members and others for adding any sites.
Carry out internet surveys to pick up some more sites not known widely.

(3) Describe the basic information and brief introduction of each site.

(a) Request the site owners to fill in the standard description form.

Refer to the standard classification criteria concerning to the aspects of indexing.

(b) For the sites picked up by Internet surveys, a WTSP member describes the site by actually visiting it.

Starting at the page shown in the survey, visit its top page, 'About us' page, and some other main pages (quickly).
Internet search inside the site is often very useful.
You may write in a relaxed format any items you understand (excerpts may be helpful).
Depending on the tentative evaluation of the site, you may describe the site closely step by step.

(4) Evaluate each site (tentatively).

To be shown in World WTSP Catalogs: ◎ Most important (about top 30)
○ Important (about top 100)
□ Worthy of World Catalog
To be shown in Country WTSP Catalogs : △ Worthy of Country Catalog
Not to be shown in WTSP catalogs: — Irrelevant, no significance, etc.

(5) Make a Table ('Flat Table') of sites with basic information for indexing. (.xlsx)

Site name, Site domain URL, Site location, Site language (possibly multiple languages), Roles of the site, Site evaluation (◎○□△), and Site Code (in the country Catalog).

(6) Make these manuscripts (3) (5) open for review and revision in the country.

(7) Convert these manuscripts into HTML pages (i.e., Web pages).

Attach a hyperlink at the Site Code in the Flat Table, and the hyperlink must indicate the anchor point placed at its site description in the Sites Description page.
Use a browser for testing the operations and hyperlinks of the Country WTSP Catalog.

(8) Submit the completed manuscript of the WTSP Catalog (of the Country Part) (with the evaluation levels ◎○□) to the Project Leader.

(9) Review the World WTSP Catalogs and adjust/revise them if necessary.

[2D] World WTSP Catalogs

Practical process

Manuscripts to be prepared by WTSP Teams

(b) Table of sites (.xlsx)
Basic data for indexing

(a) Descriptions of sites (.docx)

Convert into HTML

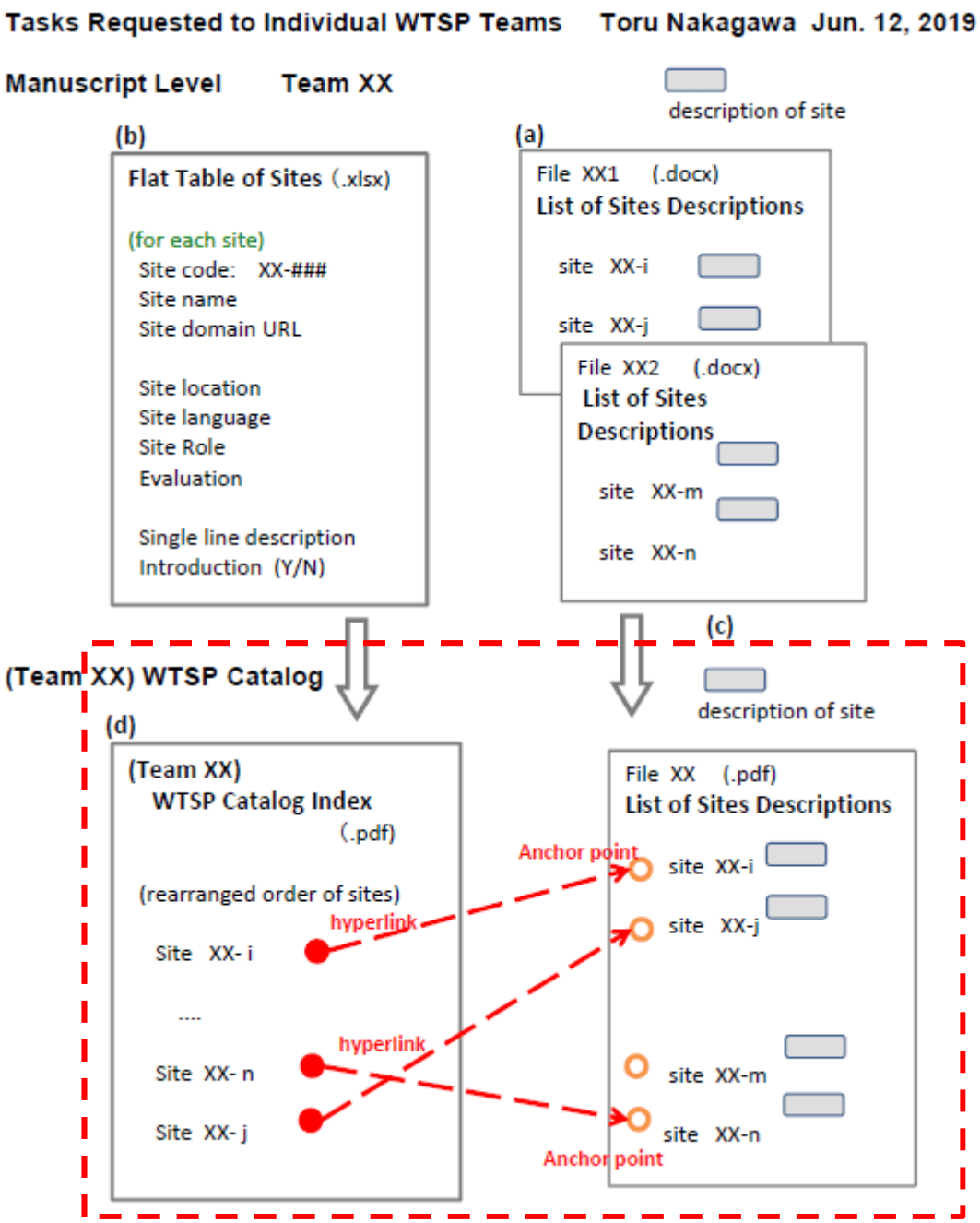
Country WTSP Catalog

(d) Index page (.html)

(c) Site description page (.html)

Integrate Catalogs of many Teams

World WTSP Catalogs



[3] Top-down Approaches and Structure of WTSP Catalogs

[3A] Top-down Activities

'19 Mar. Top-down Surveys of TRIZ sites in the world in 5 major languages (TN)

'19 Apr.-May Proposal of WTSP Database System (Ideal image) (TN)

'19 May Top-down Surveys of Around-TRIZ sites in the world (TN)

'19 Jun. Practical Vision of the World WTSP Catalogs (TN)

Top-down Strategy

'19 Jul. WTSP Practice Guide, World WTSP Catalogs (Japan Part). **(TN)**

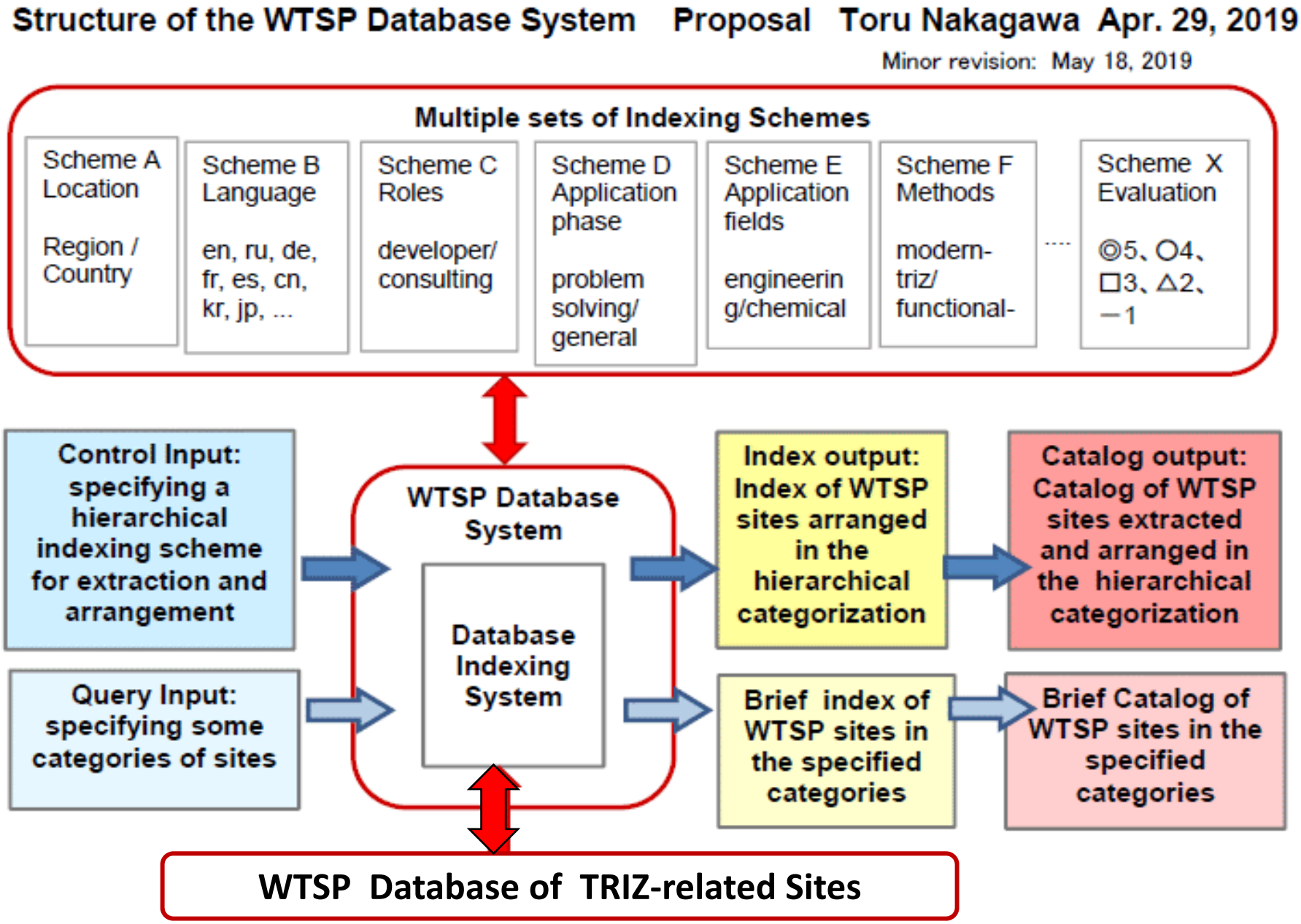
'19 Jul. Shift to Top-down Strategy to quickly build World WTSP Catalogs

'19 Aug. First Preliminary version of World WTSP Catalogs (Aug. 4, 2019) (TN)
(A) World TRIZ sites Basic Index (◎〇)

'19 Sept. Revised Preliminary version of World WTSP Catalogs (Sept. 30, 2019) (TN)
(C) World Around-TRIZ sites Basic Index (◎〇)

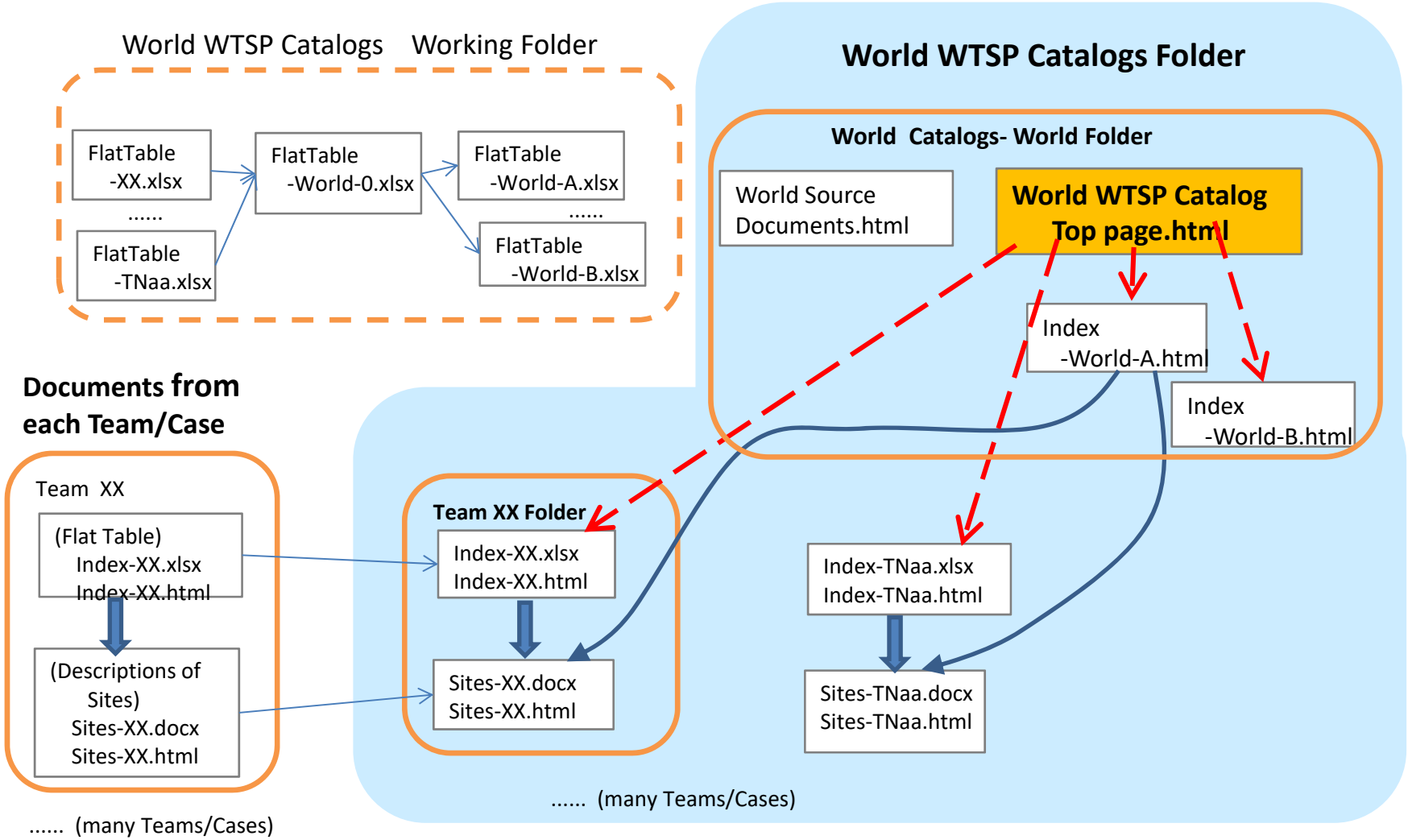
'19 Oct. 9-11 Presentation at ETRIA TFC2019

[3B] Proposal of an Ideal Image: WTSP Database System

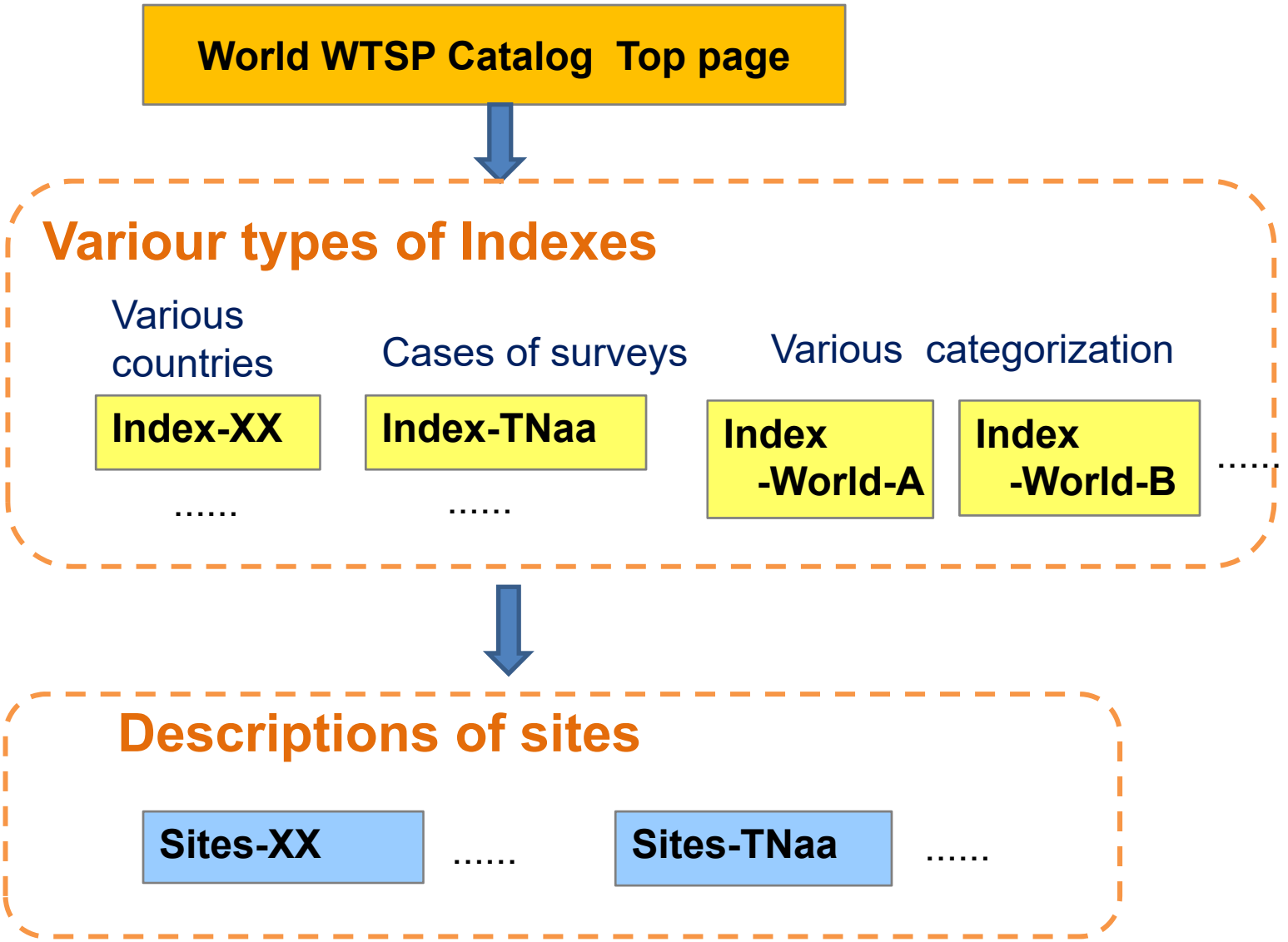


[3C] Structure of the World WTSP Catalogs (Practical & Achieved)

World WTSP Catalogs　Document Management and Folder Structure
Toru Nakagawa　2019. 8. 4



World WTSP Catalogs Structure (User's View)



[4] World WTSP Catalogs (Preliminary Version)

(A) World TRIZ Sites Basic Index (◎〇) (Aug. 4, 2019, TN)

[4A] Source Data:

Case	Country, language	Author	Number of sites
JP	**Japan**	T. Nakagawa	◎ 1, 〇 4, ☐ 5
MY	**Malaysia**	Eng Hoo Tan	◎ 1, 〇 0, ☐ 4, △ 11
CN	**China P.R.**	Runhua Tan	◎ 1, 〇 1, ☐ 13
RUL	**Russian language**	Michael Orloff	◎ 10, 〇 15, ☐ 12
TN2A	**World, English**	T. Nakagawa	◎ 6, 〇13, ☐ 29, △ 33
TN2F	**USA, English**	T. Nakagawa	◎ 6, 〇11, ☐ 27, △ 24

Example of source data

(RUL) TRIZ Sites in Russian language in the world (Michael Orloff)

◎ 01 The official foundation of G.S. Altshuller
◎ 02 OTSM by Nikolai Khomenko
◎ 03 Methodologist (Alexander Kudrjavtsev)
◎ 04 MATRIZ (The International TRIZ Association)
◎ 05 Education for a New Era (Anatol Hin)
◎ 07 Global Russian Academy of Modern TRIZ (Michael Orloff) (Germany)
◎ 12 Institute of Innovative Design (Yuri Salamatov)
◎ 20 TRIZ-Art school "TRIZ-CREATIVITY" (Roman Florescu) (Moldova)
◎ 30 (Study of geniuses and professional creativity) (Leonard Vikentjev)

○ 06 Creatime (Anatol Hin)
○ 10 Web-site (Nikolai Khomenko) (Belaus)
○ 11 Center for Creative Technologies "Ideal Solutions" (Viktor Timokhov)
○ 13 Academy of TRIZ (Michael Orloff)
○ 14 Web-site (Nikolai Shpakovsky and Elena Novitskaya) (Belaus)
○ 17 TRIZ-SOLVER.com (Yury Danilovsky) (South Korea + Russia)
○ 18 RA TRIZ (Association of Russian Developers, Teachers and Users of TRIZ)
○ 19 TRIZ encyclopedia (Vladimir Koroljov) (Ukraine)
○ 23 Custodian of the TRIZ Materials Fund in Chelyabinsk (Ljubov Kozhevnikova)
○ 24 Flow Academy - International Children's University (Irina Melnichenko)
○ 25 Open business methods and technologies with TRIZ (Sergei Sychev)
○ 26 System of consulting firms "TRIZ-CHANCE" (Leonard Vikentjev)
○ 27 Ideal Solutions Company (Viktor Timokhov and Vladimir Bubentsov)
○ 29 DIOL-group and TRIZ ○ 31 Group of TRIZ experts ☐ 14 other sites

[4B] World TRIZ Sites Basic Index (◎○)

Categorized and arranged with 'Roles of sites' and Evaluation

Roles of site	Number of sites (wth evaluation)
(a) Information sending sites	◎ 9, ○ 4
(b) Promotor organizations	◎ 5, ○ 4
(c) Public organizations	◎ 1, ○ 1
(d) Academia,	◎ 0, ○ 0
(e) Developer organizations	◎ 5, ○ 8
(e5) Training organizations	◎ 2, ○ 7
(f) Publishing organizations	◎ 0, ○ 6
(g) Information sharing,	◎ 1, ○ 7
(h) User organizations	◎ 0, ○ 2
(i) Personal	◎ 0, ○ 0
Total	**◎ 23, ○ 39**

[4C] (A) World TRIZ Sites Basic Index (◎○)

Obtained with ◎ 23, ○ 39

(A0) World TRIZ Sites Top Index (◎)

Oct. 2, 2019 Toru Nakagawa

- OTSM (Nikolai Khomenko)
- Methodologist
- Institute of Innovative Design
- Global Russian Academy of Modern TRIZ (Michael Orloff)
- TRIZ Master Leonard Vikentjev
- Education for a New Era
- TRIZ-Art school "TRIZ-CREATIVITY" (Roman Florescu)
- The official foundation of G.S. Altshuller
- Ideation International, Inc.
- GEN TRIZ
- ICG Training & Consulting
- National Engineering Research Center for Technological Innovation Method and tool (China)
- Systematic Innovation Inc.
- AULIVE
- TRIZ Power Tools
- The TRIZ Journal
- TRIZ Home Page in Japan
- Wikipedia
- MATRIZ (The International TRIZ Association)
- Altshuller Institute for TRIZ Studies
- ETRIA (The European TRIZ Association)
- TRIZ Summit / TDS
- MyTRIZ (Malaysia TRIZ Innovation Association)

[5] World WTSP Catalogs (Preliminary Version)
(C) World AROUND-TRIZ Sites Basic Index (◎○)

[5A] Philosophy

To cover the relevant areas widely where TRIZ users want to/should refer.

Double pillars with 'TRIZ Sites Catalogs' and 'AROUND-TRIZ Sites Catalogs'.

Separating these two, allowing some duplications, is practical for users.

We should make several Internet surveys with a variety of keywords carefully chosen.

Areas become much wider, where we are often unfamiliar or poor.
<==> There can be new findings in methods, applications, organizations, site types etc.

The evaluation should be handled as tentative.
Excerpts from top pages and About us pages may be practical for site descriptions.

In addition to the Roles, it may be useful to characterize the sites with respect to Application phases, Application areas, Applied methods, etc.

However, because of its difficulty, we should better postpone such trials.

[5B] AROUND-TRIZ Sites Catalogs: Source Data:

Toru Nakagawa, May - Sept., 2019

Case	Search keyword (World, English)	Number of sites
TN3A	**Creat* Think* Method***	◎ 1, ○14 □ 15, △3, ー 85
TN3A2	**Creative Think Method**	◎ 1, ○15, □ 65, △33, ー56
TN3B	(Creative OR innovative OR Systematic) **Problem Solve** (Method OR Process OR Technique)	◎ 10 , ○26, □ 64, △ 33 , ー56
TN3C	**Innovation** (Process OR Strategy OR Method OR management OR Technology)	◎ 3 , ○36 , □ 78, △ 70, ー19
TN3D	**(Quality OR Value OR Cost OR Productivity)** (Deploy OR Engineering OR Management OR Control OR Analysis) (Method OR Technique OR Theory OR Process OR "Case Study")	◎ 16 , ○38 , □ 86, △ 36, ー41
TN3E	**(Patent OR IP OR "Intellectual Property")** (Analysis OR Protect OR Circumvent OR Mapping OR Strategy)	◎ 5 , ○18 , □ 37, △ 15, ー17

In addition, some of ◎○ sites in the area of TRIZ (having some extensions) are included.
Also ◎○□ sites around TRIZ in Japan are included.

[5C] (C) World AROUND-TRIZ Sites Basic Index (◎○)

Obtained with ◎ 34, ○ 128, ☐ 13 sites

(C0) World AROUND-TRIZ Sites Top Index (◎)

Oct. 2, 2019 T. Nakagawa

- 12Manage
- PMI (Project Management Institute)
- Project Smart
- Value Based Management.net
- Free Management Library
- CFI (Corporate Finance Institute)
- ASQ (American Society of Quality)
- iSixSigma
- ipHandbook
- Stanford d.school
- Harvard Business Review
- edX
- ISO (International Organization for Standardization)
- ASME (The American Society of Mechanical Engineers)
- TED (Ideas Worth Spreading)
- ASA (American Scientific Affiliation)
- Springer
- Science Direct
- Research Gate
- Amazon
- The official foundation of G.S. Altshuller
- Ideation International, Inc.
- ICG Training & Consulting
- GEN TRIZ
- Systematic Innovation Inc
- AULIVE
- TRIZ Power Tools (OpenSourceTRIZ.com)
- The TRIZ Journal
- TRIZ Home Page in Japan
- National Engineering Research Center for Technological Innovation Method and tool (China)
- Wikipedia
- YouTube
- Slide Share
- LinkedIn

[6] Concluding Remarks

[6A] What is the crucial issue for the success of the WTSP project?

The WTSP project has been facing with the same difficulty from the beginning.
"Many people support the aims of the WTSP project,
but very few actually join to work together."
Because active TRIZ leaders are too busy to squeeze their time for WTSP.

In each country we need to have a Team and its Leader (WTSP Country Editor).

The Team leader should have the image of the goal (i.e., completed Catalogs), understand what to do and how to do in practice, be confident that the goal is reachable, and encourage and guide the Team members.

Team members and leaders should also be confident that their efforts are helpful for many people and fruitful for themselves as well.

The goals and processes of building the WTSP Catalogs have become much clearer and convincing, we believe.

Our Current Tasks: List up TRIZ related sites and describe introductions to them one by one in every country

Let's work Together ! Connected !!

Concluding Remarks:

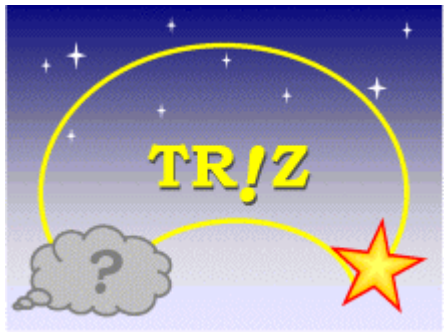
[6B] TRIZ spirits in the WTSP project

(1) **Have a vision, overcome difficulties one by one, and achieve the goal.**

(2) Divide the tasks appropriately and divide the systems appropriately as well, build the overall system so as to function effectively, and make the cooperative work by all the people fruitful

(3) Build the Catalogs of Web sites in the whole world, connect the activities/ knowledge/results by many people, and form a basis for further development and proliferation, in the field of TRIZ and related methodologies.

(4) Promote the project by relying on the passion of those people in the world who are inspired with TRIZ and holding TRIZ as an important guiding principle.



Thank you for your attention.

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Editor of "TRIZ Home Page in Japan" (in Japanese and in English)
http://www.osaka-gu.ac.jp/php/nakagawa/TRIZ/eTRIZ/

World TRIZ Sites Project (WTSP) Project Leader

Let's work Together ! Connected !!