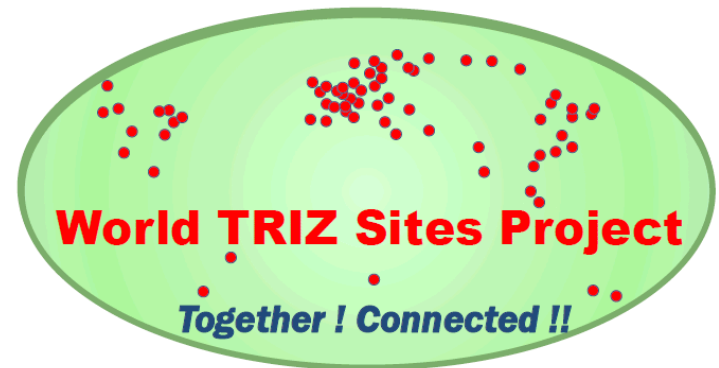


17th TRIZ Symposium in Japan 2021
Sept. 2 (Thu) - 3 (Fri), 2021
Tokyo, Online



World TRIZ-related Sites Project (WTSP) (4): Construction and Enhancement of World WTSP Catalogs of TRIZ Sites and Around-TRIZ Sites

Toru Nakagawa (Osaka Gakuin University, Japan)

Darrell Mann (Systematic Innovation Network, UK),

Michael Orloff (Academy of Instrumental Modern TRIZ, Germany),

Simon Dewulf (AULIVE & Innovation Logic , Australia)

Simon Litvin (GEN TRIZ, LLC., USA)

Valeri Souchkov (ICG Training & Consulting, Netherlands)

Outline of Presentation

[1] Introduction: Aims of the WTSP Project

Situations and Proposal, Aims of the WTSP project,
Requirements for Catalogs, Criteria of site evaluation

[2] Outputs: World WTSP Catalogs (Beta Edition, Oct. 2010)

Japan WTSP Catalogs, Set of World WTSP Catalogs,
World TRIZ Sites (© 23 sites), Building Catalogs of Around-TRIZ Sites,
World Around-TRIZ Sites (© 33), Structure of WTSP Catalogs (User's view),

[3] Development of WTSP Catalogs: Situations, Processes, Difficulties, and Strategy

History of WTSP activities, Difficulties in WTSP and strategy,
Site description in a standard form (by site owner), Optional close introduction,
Preparing manuscripts in each country, Variations of websites: Roles of sites,

[4] Concluding Remarks

User's evaluation, TRIZ spirits in WTSP,
Some more final steps to the goal of WTSP,
Thanks, Let's work Together ! Connected !!

[1] Introduction: Aims of the WTSP Project

[1A] Current TRIZ Situations ==> Proposal of WTSP

- A lot of activities and knowledge accumulation of TRIZ
- Interests in TRIZ in the world are gradually decreasing for these 10+ years
- Internet Searches for TRIZ give a lot but messy/noisy/insufficient information
- Many TRIZ-related Websites, working separately and competingly

➔ Dec. 2017 We started the WTSP Project to build Catalogs of TRIZ-related websites in the world.

Websites are useful as the units of information resources:

[better than papers, articles, web pages, books, journals, conferences, etc.]

- represent some active bodies (organizations and key persons),
- usually keep active for years and decades
- post some volume/series of works at certain quality
- accessible easily, openly, and mostly without charge
- written easy-to-read, accumulated as documents, and kept up-to-date
- good as access points for further original references

[1B] Aims of the WTSP Project

World TRIZ Sites Project

Together ! Connected !!

Oct. 29, 2018 at TFC2018

- **To build Catalogs of TRIZ-related Websites**
 - **of each country** (in their own language, then in English) and
 - **of the whole world** (in English, then in many languages)
 - with appropriate (brief or thorough) **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
- **For promoting TRIZ and relevant methodologies further in the world**
- **By voluntary collaboration of many TRIZ colleagues in the world**

**Bottom-up
Strategy**

[1C] Three Basic Requirements for Any Catalog from Users

(Cf. 'Catalogs of Good Restaurants', 'Catalogs of Sight-seeing Places', etc.)

Req. 1: Collect good items (i.e., websites in our case) widely, select them with evaluation, and show them in categories.

Req. 2: Individual items should be introduced in a proper/fair manner briefly or closely so as to guide the readers/users to the items.

Req. 3: It should be easy for users to find one/many items which match their current interest/needs inside the Catalog.

We are making efforts for our World WTSP Catalogs to fulfil these requirements as much as possible.

[1D] Evaluation Criteria of Websites in the WTSP Catalogs

Our Criteria of Site Evaluation

(recognizing diversity, we use multiple criteria)

Quality (reliable, correct, novel, original, comprehensive, up-to-date, ...)

Attractiveness (interesting, easy-to-understand, illustrative, ...)

Usefulness (resourceful, reference, handy, practical, ...)

Accessibility (open access, free/low charge, used by many, ...)

Scope (scope of the theme/field, scope of activities, ...)

Symbol marks for showing the evaluation

- ◎ **Most important (about top 30) in World Catalogs**
- **Important (about top 100) in World Catalogs**
- **Worthy in World Catalogs,**
- △ **Worthy in Country Catalogs,**
- **Insignificant/irrelevant.**

We should evaluate every site even tentatively at the early stage, and refine the evaluation later through public viewing.

[2] Outputs: World WTSP Catalogs (Beta Edition, Oct. 2010)

[2A] Japan Part of World WTSP Catalogs (Jul. 2019, Toru Nakagawa)

Japan TRIZ Sites

- ◎ TRIZ Home Page in Japan (Toru Nakagawa)
- Japan TRIZ Society (NPO)
- IDEA Corp. (Mamoru Zenko)
- MOST LLC (Kazuya Yamaguchi)
- Ideation Japan Ltd. (Teruyuki Kamimura)
- TRIZ Study (Shinsuke Kurosawa)
- Monodukuri.com (Osamu Kumasaka)
- (Former) Japan TRIZ CB
- Cybernet System Co., Ltd.
- Pro-Engineers (Shigeru Kasuya)
- Idea Plant (Rikie Ishii)
- MEMODAS (Kimihiro Hasegawa)
- △ 45 Other sites

Japan Around-TRIZ Sites

- Idea Marathon Institute (Takeo Higuchi)
- J-STAGE (JST)
- Daiichi Kousha (Akihiro Katahira)
- Netman (Ken-ichi Nagaya)
- JST (Japan Science and Technology Agency)
- NEDO (New Energy and Industrial Technology Development Organization)
- Japan Creativity Society
- JUSE (Union of Japanese Scientists & Engineers)
- JSQC (Japanese Society for Quality Control)
- SJVE (Society of Japan Value Engineering)
- JIII (Japan Institute of Invention and Innovation)
- JAIST (Japan Advanced Institute of Science & Tech.)
- i.school, The University of Tokyo
- Keio SDM, Keio University Graduate School
- △ 20 Other sites

[2B] World WTSP Catalogs

(Preliminary Edition, Oct. 2019;
Beta Edition, Oct. 2020. Toru Nakagawa)

Code	Catalog name	☉ Sites	○ Sites	(☐ Sites)	Type of Catalog *
(A1)	World TRIZ Sites Top Catalog (☉)	☉ 23	--	--	Index / Print
(A2)	World TRIZ Sites Basic Catalog (☉○)	☉ 23	○ 39	--	Index / Print
(B1)	World Around-TRIZ Sites Top Catalog (☉)	☉ 33	--	--	Index / Print
(B2)	World Around-TRIZ Sites Basic Catalog (☉○)	☉ 33	○ 127	(☐ 19)	Index / Print

- **Index type** Description of individual sites are kept in the original site description files and are accessed interactively from (various) Indexes.
- * **Print type** Print type Catalogs are PDF files which may be downloaded by the user for using interactively in PC or for printing as a Catalog booklet where the description of individual sites are already included in the PDF file.

OTSM (Nikolai Khomenko)

Methodologist

Institute of Innovative Design

Academy of Instrumental Modern TRIZ (Michael Orloff)

TRIZ Master Igor 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 & Innovation Logic

TRIZ Power Tools

TRIZ Journal

TRIZ Home Page in Japan

Wikipedia

MATRIZ (The International TRIZ Association)

Altshuller Institute for TRIZ Studies

ETRIA (European TRIZ Association)

TRIZ Summit / TDS

MyTRIZ (Malaysia TRIZ Innovation Association)

[2D] Building the WTSP Catalogs of Around-TRIZ Sites (2nd Pillar)

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

People in such relevant areas will also use the WTSP Catalogs and will get interested in and familiar with TRIZ.

We also hope integral use of methods of different origins.

There seems no common word to express such a wide area.

We call it 'Around-TRIZ' temporarily, but it may be better called 'Creative Problem Solving Methodologies'.

Separating the two Catalogs, allowing some duplications, is practical for users.

We made 5 cases of Internet surveys with the keywords (simplified here).

Creative Think Method ; Problem Solve ; Innovation ;
Quality/Value/Cost/Productivity Management ; Patent/IP

We detected about 1000 websites in total.

Visiting the sites one by one, we found their site name, site domain URL.

Reading About Us and other main pages, we described the site introductions (about 5 - 15 lines).

All the sites are evaluated tentatively into 5 grades (◎○□△—)



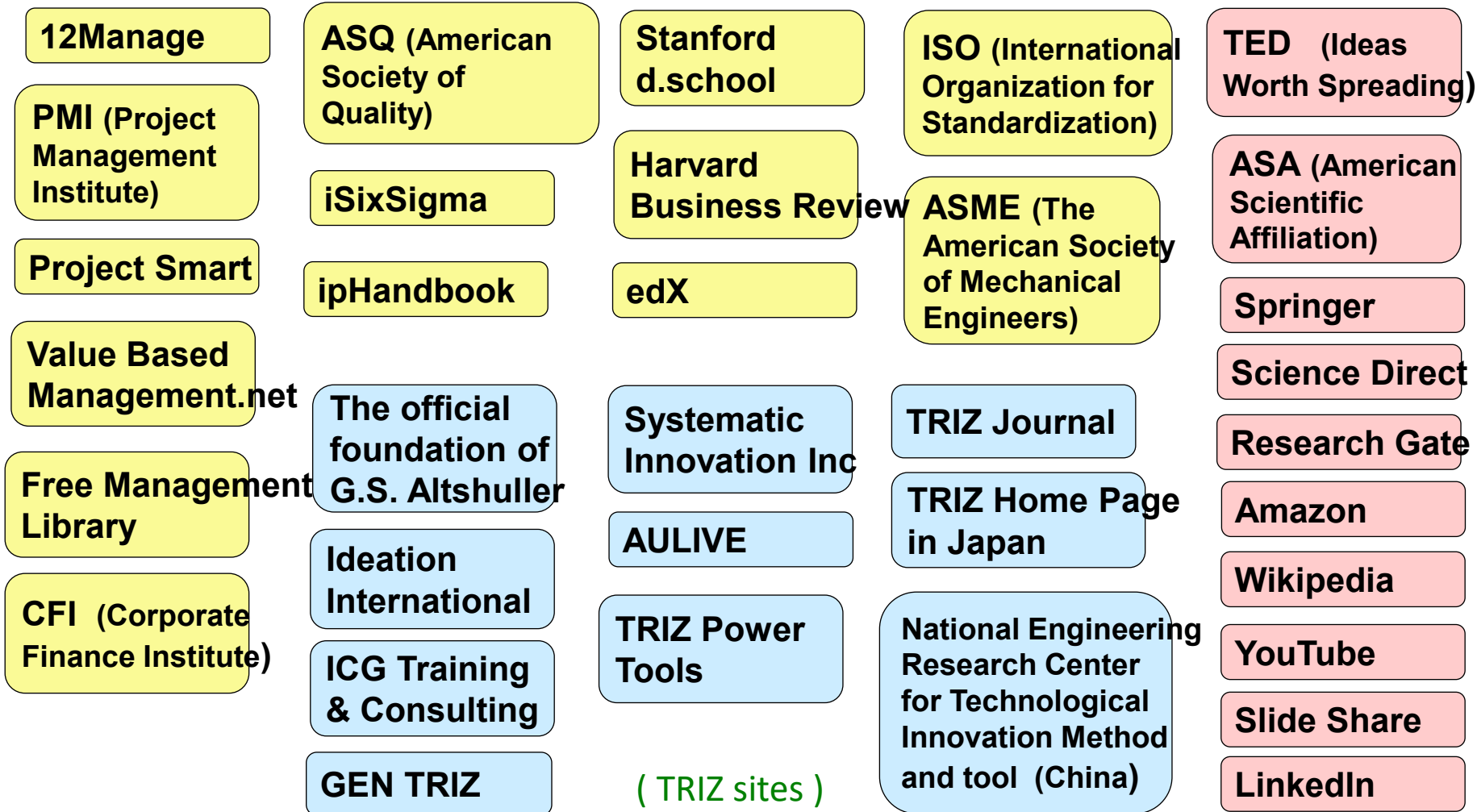
**Top-down
Approach**

[2E] World Around-TRIZ Sites Catalog © 33 Most Important sites

(Beta Edition, Jun. 2020, Toru Nakagawa)

(Specific methodologies around TRIZ)

(General sites)



Selected from about 1000 sites (5 cases of intensive Internet surveys) and Annotated individually in free-format of 5-15 lines. (Better than World TRIZ Sites Catalogs.)

[2F] Structure of the World WTSP Catalogs (Users' View)

Beta Edition (Jun. 2020)

World WTSP Catalogs Top page

Various types of Indexes/Catalogs

Source Data Catalogs

Integrated World Indexes

Integrated World Catalogs for Print

Various countries

surveys for TRIZ Sites

Around-TRIZ Sites

Index-XX

Index-TN2a

Index-TN3b

(A) World TRIZ Indexes

(B) World Around-TRIZ Indexes

(AP) World TRIZ Catalogs

(BP) World Around-TRIZ Catalogs

(Index)

(Sites)

(Index)

(Sites)

Descriptions of sites

Sites-XX

Sites-TN2a

Sites-TN3b

Download in PDF, Print and Use on your PC

[3] Development of WTSP Catalogs: Situations, Processes, Difficulties, and Strategy

[3A] History and current situations of the SWTSP activities

2017 Dec. **Started the WTSP Project.** Volunteer based, with many supporters.

2018 Apr. Pilot project. Completed the Japan WTSP Catalog.

Jun. 'Appeal for Building the World WTSP Catalogs' by the six Global Co-editors.

Oct. Presentation at ETRIA TFC2018. About 80 Members/Members-to-be (from 30 countries).

2019 Mar. Very little activities in individual countries.

Started top-down Internet surveys and development of WTSP Catalog system.

Oct. **Preliminary Edition** of World WTSP Catalogs. Presentation at ETRIA TFC2019.

2020 Jun. Very little activities in individual countries. Brushed up into **Beta Edition**.

Oct. Presented at 5 conferences Online. Russia, USA, Europe (Romania). Taiwan, Japan (Japan Creativity Society).

2021. Apr. Very little activities in individual countries. Restarted top-down Internet surveys.

WTSP information (e.g., aims, methods, outputs, strategies, etc. of WTSP Catalogs) has been posted in "TRIZ Home Page in Japan", and regularly sent to about 200 TRIZ leaders in the world.

We have many supporters, but only several persons actually working; no WTSP Teams and very little activities in individual countries.

[3B] Difficulties in the WTSP Project, and our Strategies for future

Many people support the Aims, but very few of them actually work.

"Talented and active people are always too busy."

==> The whole project is divided into many smaller tasks, easy to handle in parallel.

"The vision to the World WTSP Catalogs is so big that it seems unachievable."

==> We have already built and publicized the Beta Edition; we should now enhance and refine it.

"It is not easy to list up TRIZ-related sites in our country."

==> You should just list up what you would recommend, and add/enhance the list with your colleague, and then supplement the list by use of Internet surveys.

"It is not easy for a surveyor to write introductions to various Web sites."

==> Surveyors may write just briefly, and ask the site owners to write close introductions to their own site.

"I don't see the merits of writing introductions to my own site for WTSP Catalogs."

==> Many users and experts in the world will read/use the WTSP Catalogs. in near future.

"In our country, nobody is going to organize/coordinate a Team for building our Country WTSP Catalogs."

==> You should ask your TRIZ leaders, or try to do in a group, or become a Leader!

==> Showing practical guidelines, we should encourage pioneers and leaders to come out for working Together ! Connected !!

[4e] Standard Form of Site Description to be filled by the Site Owner

Ex: Team: JP, Site Code: JP-10, Written by Kazuya Yamaguchi

Site Name **	Ex. MOST LLC (Kazuya Yamaguchi)	
Site domain URL**	Ex. http://www7b.biglobe.ne.jp/~most/ (Japanese)	
Site Location **	Ex. Japan	#
Site Language **	Ex. jp	#
Roles of Site **	Ex. (e4) Consultants, (a1) Dedicated for information sending	#
Evaluation **	Ex. ○ Important (about top 100) in the World Catalogs (5 grades: ◎○□△-))	#
Single-line Description *	Ex. Trace records in consulting in the whole engineering fields, by use of QFD-TRIZ-Taguchi Method.	
Application phase *	Ex. (c) Solution generation phase: (c1) Idea generation, (c2) Solution building, (c3) Solution evaluation and selection	#
Application Fields *	Ex. (c) Engineering: all the subfields of Engineering (c1) through (c9)	#
Methods *	Ex. (b) Needs and problem finding: (b2) Quality Function Deployment (QFD), (g) Idea generation tools: (g1) Use of typical patterns of idea generation, (h) Solution building methods: (h1) Design methods, (j) Solution implementation methods: (j3) Manufacturing, mass production,	#
Description of Introduction *	Ex MOST LLC has obtained from many companies/laboratories, who used to have serious difficulties, the reputations that they were navigated well to wonderful solutions through consulting. .. (Free format, in 5 - 10 lines)	
Further Detailed Information	(Optional) (Separate HTML file, Free format, 2-5 (or 10) pages in A4) Ex. SiteIntro-JP-10-MOST.html (Written by Kazuya Yamaguchi)	
Note of description	Ex. Written by Kazuya Yamaguchi (Site Owner), Aug. 31, 2020	

** Mandatory, * Desirable; #: Use codes for categorizations (See detail in the WTSP website).

[3D] Optional: Close Introduction by the Site Owner

Free format in 2 - 5 pages (or more) in A4, a separate file.

Choose some style suitable for the site depending on its nature.

Ex. "TRIZ Home Page in Japan" (Toru Nakagawa) (16 pages in A4)

(1) Features: History, Editor, Purpose,
Fields/types/scopes of articles,
Special features (Parallel in Japanese and
in English, Methods for accessing articles)



(2) Selected Articles (Brief explanation of selected 160 articles)

- (a) Introducing TRIZ (1997~2001)
- (b) Introducing USIT (Unified Structured Inventive Thinking) (1998 - 2001)
- (c) Extending USIT (USIT Operator System) (2002 - 2003)
- (d) Absorbing Modernized TRIZ (At International conferences, etc.)(2001 - 2004)
- (e) 'Six-Box Scheme: A new paradigm of creative problem solving' (2003 - 2006)
- (f) Activities of Japan TRIZ Society and Japan TRIZ Symposia (2005 - 2008)
- (g) Education with TRIZ/USIT at Osaka Gakuin Univ. (2000 - 2012)
- (h) Activities of Japan TRIZ Society and international communications (2009 - 2012)
- (i) "General Methodology of Creative Problem Solving" with Six-Box Scheme (2012-2016)
- (j) Various topics of communications/issues/interests in wider scopes (2011 - 2019)
- (k) 'Liberty vs Love': the Principal Contradiction of Human Culture (2015 - 2019)
- (l) World Catalogs of TRIZ-related Sites (WTSP Project) (Dec, 2017 - present)

[3E] Preparing Manuscripts of WTSP Catalogs in Each Country

Manuscripts to be prepared by WTSP Teams

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

(a) Descriptions of sites (.docx)

Convert into HTML

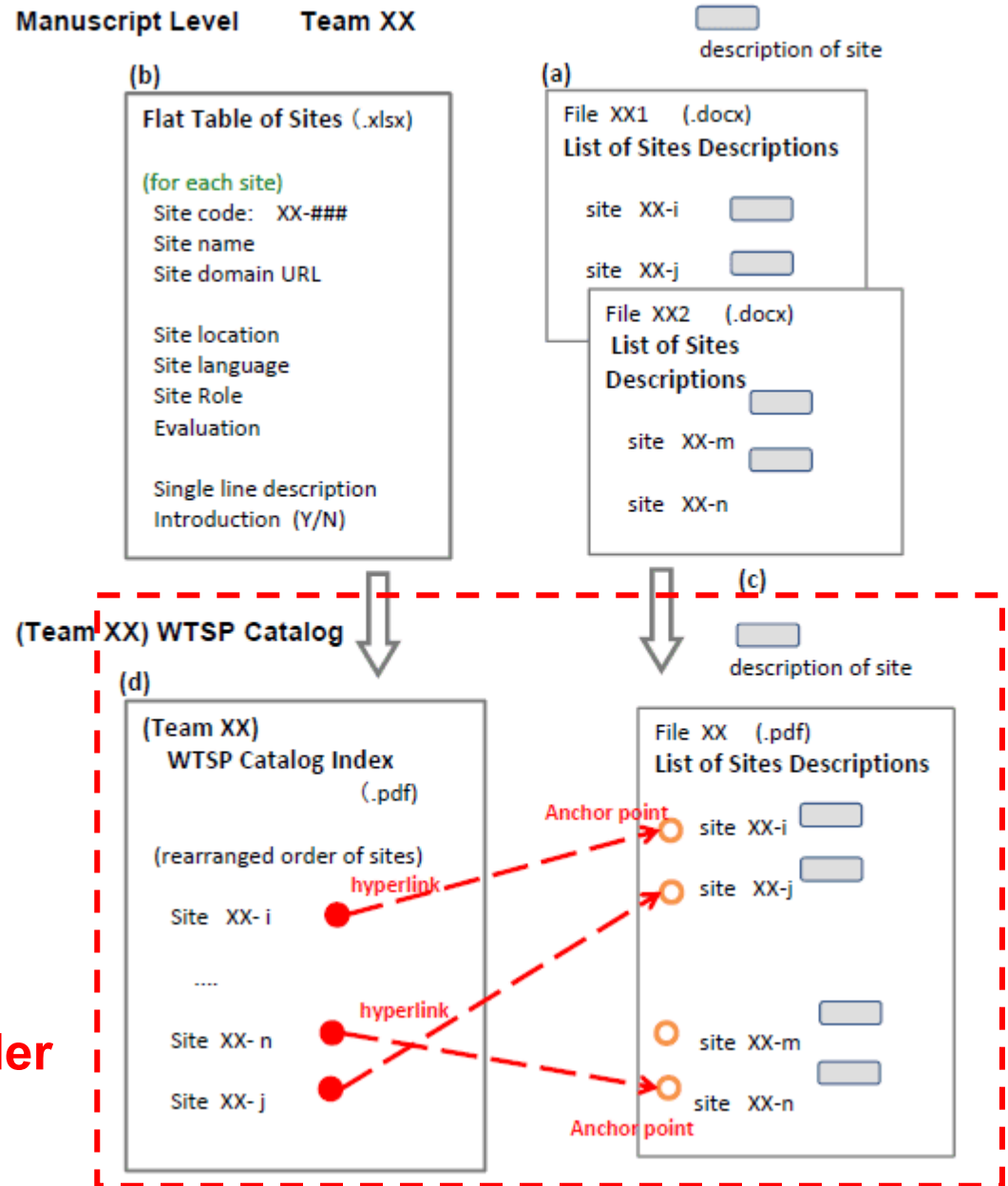
Country WTSP Catalog

(d) Index page (.html)

(c) Site description page (.html)

Submit to the WTSP Project Leader

World WTSP Catalogs



[3F] Variations of Websites: Categorized with 'Roles of sites'

Roles of site	typical subcategories	◎、○ TRIZ Sites
(a) Information sending sites	(a1) Dedicated for information sending, (a2) Public Web sites,	9, 4
(b) Promotor organizations	(b1) Dedicated associations, (b2) Dedicated (academic) societies, (b3) International conferences,	5, 4
(c) Public organizations	(c1) International organizations, (c2) National organizations	1, 1
(d) Academia,	(d1) Universities, (d4) Academic societies (in general fields),	0, 0
(e) Developer organizations	(e1) Method developers, (e2) Software/tool developers, (e4) Consultants, (e5) Training organizations,	7, 15
(f) Publishing organizations	(f1) Journals, (f2) Publishers, (f3) Repository, (f4) Book sellers,	0, 6
(g) Information sharing,	(g1) Mass media, (g2) Technology news, (g3) Knowledge sharing, (g4) Social networks,	1, 7
(h) User organizations	(h1) Industrial organizations, (h2) Companies, (h3) Educational organizations, (h5) User groups,	0, 2
(i) Personal	(i1) Individual researchers, (i3) Personal Web sites, (i4) Personal Blog sites, ...	0, 0

[4] Concluding Remarks

[4A] User's Evaluation

(Dr. Bill Fowlkes, Oct. 2019)

To the World TRIZ-related Sites Project (WTSP) Global Co-editors:

I welcome the work you are doing to collect, organize, describe and link to the many internet sites that are of interest to students and practitioners of innovative methods such as TRIZ.

I have created a new bookmark folder with links to the WTSP Catalogs of TRIZ sites and the WTSP Catalogs of AROUND-TRIZ sites, and I expect that I will be referring to them frequently.

The aggregation of these sites is much better than trying to find the data with a Google search, because the information is curated and brief descriptions are provided.

I encourage TRIZ providers and other content creators working in TRIZ related fields to participate in this project and make the World TRIZ-related Sites Project the best it can possibly be.

Dr. William Y. Fowlkes
VP, Analytics and Workflow Solutions | IP.com

Oct. 30, 2019

[4B] 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 work by all the people cooperating together fruitful
- (3) Respect the diversity of languages, histories, cultures, and activities in individual countries, and cooperate inside as well as among the countries for building World WTSP Catalogs.
- (4) Build the Catalogs of Websites in the whole world in the areas of TRIZ and related methodologies, connect the activities, accumulated knowledge, and results by the huge number of people working in such areas, and form a basis for developing and proliferating such methodologies in cooperative ways.
- (5) 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.

[4C] Some more final steps to the Goal of WTSP

Beta Edition of World WTSP Catalogs demonstrates our Goal.

It can be enhanced step by step;

Now, you can contribute to the WTSP project easily:

If you are a site owner: Write an introduction to your own site.

If you are a user: Make a list of sites you like/recommend.

If you are a TRIZ leader: Take the leadership of coordinating your people.

Then you all form a WTSP Team with a voluntary Team Leader and work together along the practice guide.

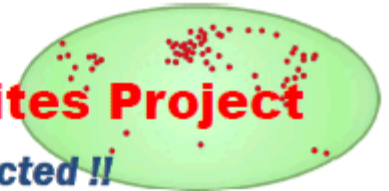
In a year, the Catalogs will get many users, from beginners to experts.

All your efforts are helpful for many people and fruitful for yourselves.

Let's work Together ! Connected !!

World TRIZ Sites Project

Together ! Connected !!





Thank you for your attention.

Toru Nakagawa (Osaka Gakuin University, Professor Emeritus)
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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-related Sites Project (WTSP) Project Leader

Let's work Together ! Connected !!