WORLD TRIZ-RELATED SITES PROJECT (WTSP) (4): WORLD WTSP CATALOGS OF TRIZ AND AROUND-TRIZ SITES, LET'S MAKE THEM ATTRACTIVE AND USEFUL!

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Abstract: *This is the 4th report of the World TRIZ-related Sites Project (WTSP). After the submission of our ETRIA TFC2020 paper (May, 2020) we have made two big achievements: (1) Completing the Beta Edition of the World WTSP Catalogs of TRIZ sites and around-TRIZ sites (Jul. 2020). (2) Presenting the WTSP activities and outputs at 4 international and 1 domestic TRIZ related-conferences held online (late Sept. - early Nov. 2020). We are working since then to enhance the WTSP Catalogs by (A) getting attractive and useful introductions of individual websites written by site owners and (B) getting manuscripts of Country WTSP Catalogs by collaborative team work in various countries. Unfortunately, however, we have got very little contributions so far. The present paper explains the structure of the current World WTSP Catalogs by illustrating with excellent new examples of close site introductions and also the process of building them. The difficulties in getting voluntary contributions to the project are discussed. We are going to (C) carry out top-down Internet surveys in a number of important countries and support the bottom-up jobs (A) and (B). Let' work Together ! Connected !!*

Key words: *World TRIZ-related Sites Project (WTSP), World TRIZ Sites Catalogs, World Around-TRIZ Sites Catalogs, Global collaboration.*

1. INTRODUCTION

In our fields of TRIZ and related methodologies, there must be a huge amount and variety of accumulated knowledge, applications, activities, etc. in the world. Such abundance of information does not mean easy access to selected good information sources of interests. For example, ordinary Internet searches with any keyword, like TRIZ, outputs hundreds of webpages easily, but the information is messy, noisy, and also missing. For overcoming this difficulty, we have started to build Catalogs of selected websites in the world in the fields of TRIZ and related methodologies.

As the unit of information source, we have chosen Websites, instead of Web pages, papers, articles, books, journals, conferences, organizations, etc. Web sites usually represent a group of people with a common academic/business approach and post a series of articles more or less in a systematic manner for many years, actively keeping them up-to-date, mostly free of charge and open access (or sometimes with relatively low subscription fees). Website is the primary and standing media for the site owner to get high public reputation from many readers/users/customers; thus, the site owner proudly puts much efforts for building and maintaining it.

Catalogs of Websites worldwide in some specific academic/industrial field is a new concept, as far as we know. Some Web sites post 'lists of Links', containing relatively small number of sites showing site names, URLs, and very short annotations.

Catalogs in general should satisfy three basic requirements (cf. 'Catalogs of Good Restaurants', 'Catalogs of Nice Sight-seeing Places', etc.): (1) Listing good items with evaluation (without missing excellent items), (2) Introducing good items individually with attractive and useful information, and (3) Capable to find one or multiple items of interests

of various users. We want to build our Catalogs satisfying these requirements as much as possible.

For building such Catalogs of Websites in TRIZ and related methodologies, we clearly need collaborative work of many people in these fields. Our vision is large and the image of the outputs was not clear at first. Active people in our TRIZ community are always very busy, of course, in their own businesses and some public services. And they are sometimes competitive in their approaches, businesses, organizations, etc. Knowing all these situations, we started our project solely on the voluntary basis.

2. SHORT HISTORY OF OUR PROJECT

We started the World TRIZ-related Sites Project (WTSP) in Dec. 2017 as a voluntary project for building Catalogs of selected websites on TRIZ and relevant methodologies in the world. Toru Nakagawa proposed the project, got supports from a number of people, and the six co-authors of the present paper joined to serve as Global Co-editors.

Fig. 1. Aims of the WTSP project [1]

The Aims of the project are stated clearly in the following slide presented at ETRIA TFC 2018 [1].

A pilot project was carried out to build a WTSP Catalog of TRIZ and around-TRIZ websites in Japan and demonstrated effective use of Internet surveys and compact introduction of individual sites with (tentative) evaluation. "TRIZ Home Page in Japan" [2] served as the platform of WTSP. Information of and invitation to the project were sent regularly to about 200 leaders/colleagues in the global TRIZ community. Thus at the TFC2018, about 80 people from 30 countries joined (or signed to join) WTSP as a member voluntarily.

In the next year, team formation and bottom-up work of making Catalogs in individual countries were expected, but they did not emerge unfortunately. Hence Nakagawa started intensive top-down Internet surveys for TRIZ sites in the world and in USA. Getting Catalog manuscripts from Malaysia, China, and Russian Language region (in addition to Japan), a World TRIZ sites Catalog was build, leaving manuscripts missing from many (30 to 40) other countries. In addition, websites in the fields around TRIZ were intensively surveyed by Nakagawa with Internet search using keywords including Creative think method, Problem solving, Innovation, Quality/value/ productivity, IP, etc. Visiting about 1000 websites one by one, World Catalogs of Around-TRIZ sites were built.

In October 2019 at TFC [3], we reported the completion of the Preliminary Edition of our World WTSP Catalogs. It had two pillars, i.e. Catalogs of TRIZ sites and Catalogs of Around-TRIZ sites, and the sites were selected and listed in classification of their (tentative) evaluation of importance and introduced individually in 3-15 lines of description written by the WTSP surveyors. The structure of the WTSP Catalogs and the processes of building the Catalogs (i.e., searching, visiting, describing and evaluating individual sites and forming Country and then World WTSP Catalogs) were established at this stage.

In 2020, we wanted to enhance the World WTSP Catalogs, in two points; firstly to get thorough closer descriptions of highly-evaluated individual sites, and secondly to get manuscripts of Country Catalogs from many countries. But these hopes were not realized, unfortunately again. Thus in May 2020 we submitted our paper to the TFC2020 [4] on the basis of the

Preliminary Edition presented in the slides of TFC2019.

In July 2020, we have set up the Beta Edition of the World WTSP Catalogs. Even though the enhancement of data were quite small, the Beta Edition were made well accessible for users in the world. The WTSP Catalogs were originally designed as an interactive system to be used by accessing the WTSP site with a browser. In the Beta Edition, we added a group of PDF files of WTSP Catalogs, which are downloadable by any user for using interactively in their own PCs and printing just as a Catalog booklet. Due to the COVID-19 pandemic, various conferences in TRIZ were shifted from real to online events. Using this opportunity, we presented our WTSP reports in five conferences in autumn 2020 (See Table 1) [4-8]. We gave slides and video presentations, while adjusting the contents and emphasis to the interests of the audiences in different regions.

Table 1
WTSP Presentations at 5 Conferences in fall 2020

Conference(Place)	Paper / Slides / Video	Ref
MATRIZ Online Forum (Russia)	- / 28, 13(R) / -	[5]
TRIZCON (USA)	- / 28 / 38 min	[6]
TFC (Romania)	12 p. / 28 / 32 min	[4]
ICSI (Taiwan)	- / 13 / 15 min	[7]
JCS (Japan)	8 p. (J) / 26 (J) / 22 min (J)	[8]

At present in April 2021, we are facing with more or less the same situation as the previous years. Even though we are encouraging/ requesting many Members and supporters in global TRIZ community, very few activities are observed among them to prepare for individual site descriptions and country Catalogs. Thus in the present paper submitting to ETRIA TFC2021, we describe mostly on the basis of our Beta Edition (covered in the slides [4] but not in the paper [4]) adding some latest materials and discussions . In several months until ETRIA TFC2021, we hope to enhance our World WTSP Catalogs into the Third Edition mostly by a top-down approach.

3. CURRENT STATE OF THE WORLD WTSP CATALOGS

The current Beta Edition of the World WTSP Catalogs has the main components as summarized in Table 2.

Table 2
Beta Edition of the World WTSP Catalogs

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

3.1 World WTSP TRIZ Sites Catalogs [4]

The Beta Edition is based on the manuscripts contributed from 4 countries (i.e., Japan by T. Nakagawa, Malaysia by Eng Hoo Tan, China by Runhua Tan, and Russian language region by Michael Orloff) and supplemented by two cases of Internet surveys (of the sites in the world and of the sites in USA). It lists 23 Most Important sites ◎ and 39 Important sites ○. (Refer to Section 4.1 on the evaluation criteria.) All the sites are annotated in 3-15 lines in free format (besides the basic information such as site name, URL, country, language, role of site) and several of them have closer descriptions. We should note that many good sites are missing because manuscripts have not yet submitted from many (probably 30-40) countries.

3.2 World WTSP Around-TRIZ Sites Catalogs [4]

It is our WTSP philosophy to cover a wider range of fields relevant to TRIZ. We TRIZ people should aware of other methodologies, while those people there should know TRIZ; and we all should work together for our common goals. In practice, Nakagawa made intensive Internet surveys with keywords, including Creative think method, Problem solving, Innovation, Quality/value/cost/ productivity, Patent, etc. About 1000 Websites were detected all together. Visiting them one by one, individual sites were described in 3-15 lines by summarizing/excerpting the information in top

pages, 'About us' pages, and some more main pages. Evaluation of those sites was difficult because of so wide areas now have 33 ◎ sites and 127 ○ sites. The selection of these sites is expected to be fairly reasonable without large missing zones.

3.3 Structure of the WTSP Catalogs [4]

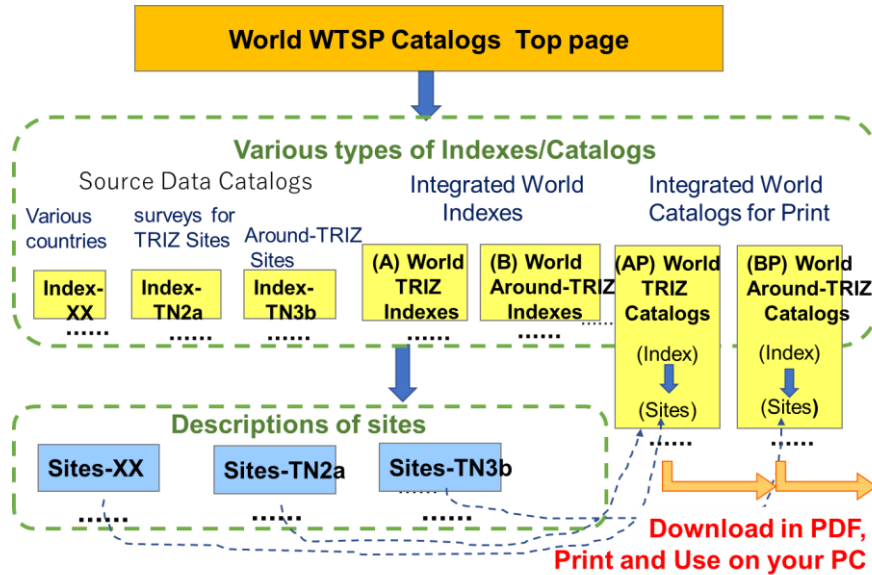he structure of the WTSP Catalog system from user's view is illustrated in Fig. 2.

Fig. 2. Structure of the World WTSP Catalogs (User's View) [4]

At the top page of the WTSP Catalog system, users can see various types of Indexes/Catalogs. An Index page shows a table of websites (e.g., of a country, a survey case, World TRIZ sites, World Around-TRIZ sites, etc.) with their basic information (including Site code, Site name, URL, country, single-line description, etc.). By clicking the Site code of a site, the description of the site is immediately shown by use of the hyperlink. Descriptions of sites are basically stored in the files of original manuscripts, and can be accessed from various Indexes where various sites are grouped and re-arranged. This structure of separating Index files from Site description files serves for flexibility in the Index and stability in the Site description, and hence for scalability and maintainability of the system.

'World Catalogs for Print', on the other hand, contains the Index table and the descriptions of individual sites copied from the Site description files. It is provided as a PDF file (in addition to an HTML file as usual) which may be downloaded by any user for printing it out as a booklet and for using it in one's own PCs interactively just as using in the WTSP site. This type of Catalogs serves for wider distribution and easier use of the WTSP Catalogs.

3.4. Description of Individual Sites

Introducing individual sites is very important for our project. We have 3 levels of description.

(a) Free-format introduction in 3-10 lines by a surveyor,

(b) Standard Form of Site Description (in 1 page in A4), mandatory and to be written by the site owner. It is illustrated in Fig. 3 with an example contributed recently by Simon Litvin [9].

The top 7 items with ** are the mandatory basic data to be used for sorting/rearranging sites in the Index and shown in the Index. Seven items with ## should be written with the codes specified in our Guidelines [10] for the purpose of classifying and retrieving the sites. In case of multiple answers to such an item, the answers should better be arranged in the order of importance for the site. Free description of the site is expected only 5-10 lines in the Standard Form. The space is too small for site owners to describe the significance and usefulness of their sites.

Site Description Form   WTSP (World TRIZ Sites Project)   (Version: 2021/ 3/25   TN)

Team: USA   Site Code: TN2F-07   Writer: Alex Lyubomirskiy   Date: April 07, 2021

Note (...) : Partially abbreviated for demonstration   TN   Apr. 25, 2021

Item	Description	Note
Site Name **	GEN TRIZ, LLC	
Site domain URL **	https://www.GEN-TRIZ.com	
Site Location **	US	##
Site Language **	en	##
Roles of Site **	(e4) Consultants, (e5) Training organizations, (e6) Seminar organizations, (e1) Method developers, (e8) Solution providers, (e2) Software/tool developers,	##
Evaluation **	◎ (Most Important, about top 30 in the world)	##
Single-line Description **	GEN TRIZ, LLC, its services, applied methods, and case studies	
Application phase *	(a) General preparation phase, (b) Problem finding and analysis phase, (c) Solution generation phase, (d) Solution implementation phase, (e) Intellectual properties	##
Application Fields *	(a) General/universal, (b) Science, (c) Engineering, (d) Biological and medical fields, (e) Business fields	##
Methods *	(a3) Facilitation methods, (a4) Training methods, (a5) ..., (b1) Gathering and analyzing Voice of customers, (b3) ..., (b4) ..., (c2) Cause-effect analysis of problem situations, (c3) ..., (c4) ..., (d) Creative thinking, (e) Systems analysis, (f) Use of knowledge, (g) Idea generation tools, (h) Solution building methods, (i) Solution evaluation methods, (k) Intellectual properties, (m) Classical TRIZ methods, (n) Modernized TRIZ methods	##
Description of Introduction *	The website includes: HOME – home page ABOUT: About GEN TRIZ, Value Statement, Global Knowledge Network, Leadership, Clients SERVICES: Product Innovation, Manufacturing Innovation, Technology Forecasting, IP Strategy, Facilitation and Training, Future Capabilities Assessment METHODOLOGY: Our Approach, Main Parameters of Value, Technology Trends, Functions, Key Problems, Function-Oriented Search ..... OUR ACHIEVEMENTS: ...... CASE STUDIES: Technology Scouting, Product/Process Improvement, ... NEWS CONTACTS	(Free format, in 5-10 lines) (Note: The phrases underlined have direct links to the pages in the GEN TRIZ website.)
Further Detailed Information	See the page "TRIZ Challenges and Approaches to Address Them" by Simon Litvin ... Engl	Optional
Note of description	Written by Alex Lyubomirskiy and Simon Litvin (.... : Abbreviated by TN)	

Note: Adjust/expand the cell spaces as you need.
      ##:   Refer the codes in "Multi sets of Indexing Schemes for the WTSP Catalog System" Engl
https://www.osaka-gu.ac.jp/php/nakagawa/TRIZ/eTRIZ/eWTSP/eWTSP-DatabaseSystem/eWTSP-CatalogSystem-IndexSchemes.html   (2020/11/20 TN).   ** Mandatory,   * Desirable

Fig. 3. Example of site description in the WTSP Standard Form [9]. Partially abbreviated for demonstration.

(c) Thus we have an option to accept a separate file for closer description in free format (2-5 pages or more in A4, with figures and tables). Figure 4 shows such an example for the case of "TRIZ Power Tools" site written by Larry Ball [11] (but abbreviated much just into a summary by TN for showing here).

It is obvious that site descriptions in Standard Form (Fig. 3) is much desirable but impossible by surveyors outside the sites. So we are asking the site owners for writing their own sites (b) in the Standard Form and contribute to the World WTSP Catalogs.

3.5 Building Country WTSP Catalogs

As shown in our Aims (Fig. 1), building Country Catalogs should be the basic step for our project. The process is shown in our Guidelines [10]. First we should make a list of recommended sites, in the form of the Index table containing the basic information suggested with ** in Fig. 3. A group of people in the country may be able to list up their favorite/recommended sites and supplement them with internet surveys. Visiting such sites and writing brief notes (a) in 3-10 lines in free format may be possible by the volunteers supporting WTSP (Fig. 4). Getting site owners contributed their site descriptions (b) (as shown in Section 3.4) is the most important step. We need somebody who plays the leadership as a

coordinator (or Country Editor). Then the manuscripts are arranged in the form of Country WTSP Catalog, after referencing to the Guidelines [10] and existing samples.

This is a system of eBooks authored principally by **Larry Ball.**
He was introduced to TRIZ by reading "TRIZ as an Exact Science" by G. Altshuller **in 1989**. Following that, he studied, used, and taught TRIZ and invention algorithms for many years, while continuing to read more TRIZ books and articles.
He began posting his teaching materials in the TRIZ Journal in 2002 and its revised edition "Hierarchical TRIZ Algorithms" in 2005.
The present eBooks "**TRIZ Power Tools**" were posted in May 2018, after much revisions.

The contents are mainly based on TRIZ but reflects other methods including Design Thinking, Disruptive Innovations and Marketing, Blue Ocean Strategy, Theory of Constraints, and One Simple Idea.
He believes that **the best way to learn TRIZ deeply** is to create your own product design and inventing algorithms after your own understanding, according to modern learning theory.

The contents are composed of two big groups.
(A) Inventive Jobs
(e.g., Discovering markets, Creating offerings (products/services), Designing and prototyping, Reducing offering burdens, Resolving problems, Selling of licensing your offering) and
(B) Inventive Skills
(e.g., Resolving contradictions, Working with functions, Idealizing useful functions, Idealizing informing functions, Idealizing harmful functions, Discovering cause, Discovering why targeted objects are required, Mobilizing function resources, Neutralizing harmful functions).
These jobs and skills are to be used in various ways of appropriate combinations, as guided by the **eBook navigation**

While written in English, each of the eBooks can be translated automatically into (practically) **any language** with the Google translator without waiting.

Fig. 4. Example of close site description in free format [11]. Much abbreviated by TN for demonstration.

3.6 Integrating into World WTSP Catalogs

Manuscripts of Country Catalogs and close Site Introductions (like Figs. 3 and 4) are submitted to the Project Leader (TN). Index files of the manuscripts and existing World Catalogs are integrated into a big Index, and (after some preliminary handling of overlapping sites) all the sites are classified and rearranged in any manner as being intended for the World Catalogs.

3.7. Recent Contributions of Manuscripts

Since last October till now, we have received (and publicized) new manuscripts of Site description as follows (but no Country Catalogs).

Table 3.
Recent contributions of Site Introductions

Code	Site name (contributor)	manuscripts
JP-10	MOST (K. Yamaguchi)	(b), (c) J[12]
TN2F-06	TRIZ Power Tools (L. Ball)	(b), (c) [11]
TN2F-07	GEN TRIZ (S. Litvin)	(b), (c) [9]
RUL-14	TRIZ Trainer (N. Shpakovsky)	(b)-
	Southbeach Modeller (H. Smith)	(b)-
TW-01,02	SSI, I-SIM (D. Sheu)	(b)-

3.8 Organizing Activities of WTSP Project

As mentioned in our history (Section 2.), activities by members and formation of teams in individual countries have been very rare. This issue is discussed later (Sections 4.4 - 4.6).

4. ISSUES TO BE SOLVED

4.1 Evaluation of Individual Sites

We have set the criteria of site evaluation qualitatively as shown in Fig. 4. One of our desires is to find good websites not known widely yet due to language barriers, local activities, etc. and publicize them widely. Evaluation is delicate and difficult, but we have to do it even tentatively. Evaluations will be refined later by public reviewing.

Criteria of Website Evaluation:

Quality (reliable, correct, novel, original, comprehensive, up-to-date, ...)
Usefulness (resourceful, reference, handy, practical, ...)
Attractiveness (interesting, easy-to-understand, illustrative, ...)
Accessibility (open access, free/low charge, used by many, ...)
Scope (scope of the theme/field, scope of activities, ...)

Evaluation of Website in the WTSP Catalogs

◎ **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.

Fig. 5. Criteria of Evaluating Individual Websites [4]

4.2 Range of Fields and Scopes

In the WTSP TRIZ Catalogs we include not only classical and modernized TRIZ but also derivatives of TRIZ, now called in different names, e.g. Systematic Innovation, USIT, etc. In the WTSP Around-TRIZ Catalogs, our range of fields is much wider; various methodologies and approaches having essentially the common goals with TRIZ. We wish to form cooperative attitude among communities involved in different methodologies, for the purpose of solving various difficult problems in the world.

4.3 Categorizing Websites in WTSP Catalogs

As shown in Fig. 3, we use multiple schemes for characterizing/categorizing various Websites. They are useful firstly for us to understand the individual site in multiple aspects, and secondly to classify hundreds of sites in the WTSP Catalogs. At moment, for listing the sites in our WTSP Catalogs, we use the categorization of TRIZ/Around-TRIZ, Site evaluation, and Roles of site. It is the third basic requirement that users want to find good websites of their various interests. For this purpose it is much desirable to get information from the site owners about the application phases, application fields, and methods handled in their sites. This is our intention of using (b) the Standard Form (Fig. 3) instead of (a) ordinary brief free-format introduction.

4.4 What are the Merits of the WTSP Catalogs?

The WTSP Catalogs, in their final form, have accumulated full information about TRIZ and relevant methodologies in the units of websites all over the world.

Advantage of websites as the unit of information resource over others (such as papers, web pages, books, journals, conferences, etc.) are already mentioned in Section 1. Websites usually represent a body of thoughts and activities of a group of people and kept up-to-date for several years. Contents are introduced and shown in some systematic manner. Websites are widely accessible from any place and by any person, and their public pages are open access without charge. Information in the web pages is usually introductory and summarized, but often shows their original sources which may be of limited access with memberships or charges.

Accumulation of such information needs a lot of work. Internet surveys give us a flood of noisy but insufficient information. That's why we are struggling in the WTSP Project. Once we have done the jobs, everybody can access the results.

In October 2019, we received a message from a reader, Dr. Bill Fowlkes [13]. Please allow me to cite his message here again (Fig. 6).

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   Oct. 30, 2019
VP, Analytics and Workflow Solutions| IP.com

Fig. 6. A message from a reader [13]

4.5 Who Needs the WTSP Catalogs?

Everybody in the world who wants to learn and apply good methods need he WTSP Catalogs for solving their difficulties/problems.
- Experts in TRIZ (or any other methodologies) need Them to get overview of the fields and study some different groups of works closely.
- Practitioners need Them to find good approaches in theory, methods, application cases, etc. and to improve their capabilities.
- Users need Them to find good teachers and consultants for studying and introducing the methods into their work and their organizations.

- Students and beginners need Them to learn about what are the methods for problem solving.
- Site owners need Them for promoting their Website, their methods, and their business.

4.6 Difficulties in the WTSP Project Itself

We have a main difficulty throughout our history, as mentioned in Section 2. I.e., "Many people in the TRIZ community support (and join) WTSP, but very few of them actually contribute to WTSP." Here are discussions about some reasons and solutions (trials) for them.

(1) "Active, talented persons are always too busy in their business." ==> Dividing the jobs for building the WTSP Catalogs into many smaller units (in a systematic and hierarchical manner) which can be achieved individually in parallel.

(2) "The vision of WTSP looks too big to accomplish." ==> We have already built the Beta Edition of the World WTSP Catalogs. We should enhance them further step by step.

(3) "No body in our country voluntarily serves as the coordinator. It is a hard job, I don't want to be." ==> Coordination is absolutely necessary when we have distributed many small jobs. We wish to have (TRIZ) leaders in every community/country.

(4) "Since I am just a user, I can't contribute." ==> Users can make a list of favorite/ recommended websites in each country, forming a good basis of Country WTSP Catalogs.

(5) "I don't find any significance/merit of introducing my own site in the WTSP Catalogs." ==> See Sections 4.4 and 4.5.

(6) "I don't want to show my site in the Catalogs together with my competitors having different philosophies." ==> Diversity is essential in solving many different problems in the world; thus our WTSP Catalogs should accept various sites having different philosophies.

(7) "The WTSP Catalogs are not known widely yet. Very few people introduce their sites." ==> The concept of Catalogs of websites in an (academic/industrial) field is new. Please recognize the significance of such an emerging concept.

(8) "The WTSP Catalogs do not have a large user base yet." ==> We are doing our best to enhance the WTSP Catalogs and get many users as soon as possible. We need to make better Catalogs first, before getting more users.

(9) "The WTSP Catalogs looks not attractive nor useful." ==> Attractive and useful introductions of individual sites are the basis. Please write such introductions of your own sites.

(10) "Why don't you use AI for your project?" ==> At the present stage, human specialists (i.e., ourselves) can do better jobs than AI, in writing summaries/introductions to individual sites, evaluating the sites, and collecting/selecting good sites. (Since Internet search engines are one of the most basic and frequently used software tools, it is natural that AI has been incorporated into them as feasible as much. Internet search engines have become much faster, more powerful and convenient. But the quality of their outputs is very poor for our purpose having the selection criteria shown in Section 4.1. They pick up Web pages containing the user-specified keywords and display a few lines of texts, without evaluating the Web page in reference to our diverse criteria. They cannot evaluate individual Websites having a large number of relevant and irrelevant Web pages. And hence they cannot evaluate and select good Websites in individual countries or in the world.) We will need to wait for several years or some decades. We will gradually use AI as an assistant in our jobs in near future.

4.7 Strategies of the WTSP Project this year

The basic plan this year is to enhance the Beta Edition of the World WTSP Catalogs [13]. We should do our best efforts for

(1) Getting attractive and useful introductions of individual websites written by site owners. (2) Getting manuscripts of Country WTSP Catalogs by collaborative team work in various countries,

and we have recently decided to add another approach of

(3) Carrying out top-down Internet surveys in a number of important countries and support the bottom-up jobs (1) and (2).

4.8 Recent Activities (May - Jun. 2021)

Top-down Internet surveys have been carried out for the Websites in the following 14

countries. With the help of Google Translator, the detected Websites are quickly visited and their Site name and Site domain URL have been shown. UK (68 Websites), France (55), Italy (50), Belgium (22), Netherlands (33), Germany (68), Poland (50), Sweden (19), Finland (21) , Iran (64), Thailand (31), Korea (72), Australia (23), Canada (30).

No manuscripts have been submitted from individual Website owners nor from Country teams for these two months, to our pity.

A new full paper in Japanese [15] (originally submitted in Dec. 2020 to the Journal of Japan Creativity Society, but not accepted) has been publicized in "TRIZ Home Page in Japan".

5. CONCLUDING REMARKS

Our vision of the World WTSP Catalogs has been demonstrated well by the 'Beta Edition' (2020). We should enhance them step by step this year. As discussed in Section 4.6, we have been facing with difficulties in obtaining active contributions from people in the TRIZ community. We are doing our best in the strategies written in Section 4.7. It is most important to keep our vision (Fig. 1) high and our passion and reliance on our TRIZ community solid.

Let's work Together ! Connected !!

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PROIECTUL SITE-URILOR DIN LUME LEGATE DE TRIZ (WTSP) (4): CATALOAGE WTSP ALE SITE-URILOR TRIZ ȘI ASOCIATE TRIZ, SA LE FACEM ATRACTIVE ȘI UTILE!

Rezumat: Acesta este cel de-al patrulea raport al Proiectului mondial de site-uri legate de TRIZ (WTSP). După trimiterea lucrării noastre ETRIA TFC2020 (mai 2020), am realizat două mari realizări: (1) Finalizarea ediției beta a cataloagelor mondiale WTSP a site-urilor TRIZ și a site-urilor din jurul TRIZ (iulie 2020). (2) Prezentarea activităților și rezultatelor WTSP la 4 conferințe internaționale și 1 conferință internă legate de TRIZ desfășurate online (sfârșitul lunii septembrie - începutul lunii noiembrie 2020). De atunci lucrăm pentru a îmbunătăți cataloagele WTSP prin (A) obținerea unor prezentări atractive și utile ale site-urilor web individuale scrise de proprietarii de site-uri și (B) obținerea manuscriselor cataloagelor WTSP de țară prin munca de echipă colaborativă în diferite țări. Din păcate, cu toate acestea, am primit foarte puține contribuții până acum. Prezenta lucrare explică structura actualelor cataloage mondiale WTSP, ilustrând cu noi exemple excelente de introduceri în site-uri apropiate și, de asemenea, procesul de construire a acestora. Sunt discutate dificultățile de a obține contribuții voluntare la proiect. Vom (C) realiza sondaje pe internet de sus în jos într-o serie de țări importante și o să sprijinim locurile de muncă de jos în sus (A) și (B). Să lucrăm împreună! Conectați!

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