TPS Software Framework

Electronic Organization

"A stand alone, Extensible, Flexible, and Maintainable Software Framework designed and developed to be used for implementing sophisticated Business Logics especially a custom Electronic Organization Management System"

Project URL:

http://www.ebtps.com/development/tps-framework.html

General Description

"**TPS Software Framework** is an independent, stand alone, powerful, and highly extensible, flexible, and maintainable software framework as a set of classes written in PHP programming language that implement the core functionalities required for creating a custom Electronic Organization Management Solution."

"An **Electronic Organization Management Solution** is created according to specific Business Logic Requirements of an organization and it enables Integrated Management of all Organizational Resources and Relations, including Documents, Media, and Downloads, Countries, Zones, GeoZones, and Contacts, Departments, User Fields, User Profiles with various classes or roles such as Customers (Clients), Partners (Partnerships), Employees (Collaborators - Human Resources), Entrepreneurs, Investors, and Independent Users, Customer (Client) Relationships and Marketing Resources including Newsletters and Mailing Lists, Relations and Visibility of users to each other, Asynchronous Communications including Message Threads, Ticket Threads, Orders, Requests, and Contracts, Notes, Commerce including Currencies, Taxes, Brands, Products, Services, Subscription Definitions, Shopping Cart, Subscriptions, Invoices, Payments, Shipments, and Expenses, Even Driven Notifications, All Organizational Events including creations, changes, and deletions, User Groups and Communities, Custom Forms, Records, Tasks and Workflows, across the boundaries of that Organization."

"**TPS Framework** can be easily extended to support new types of entities, new classes of user profiles, new types of user contents, new visibility policies, new types of notifications, new types of relations, and new scopes for media management, by a considerably little development effort. Realizing a light and at

the same time powerful, extensible, flexible, and maintainable software framework has been the most important principle in designing the architecture of TPS Framework. TPS Framework should ideally provide all the functions required for storing, retrieving, and processing of data in a custom Electronic Organization Management System."

Motivation: Why TPS Framework?

An Electronic Organization Management Solution (EOMS) can be considered as a sophisticated business application which might be needed to implement some complex business logics. But, high quality and efficient development and maintenance of sophisticated business applications implementing some complex business logics actually involves developing well-designed high level classes of objects that are organized in well-designed object oriented architecture. So ideally, such a software framework is needed for implementing a custom EOMS that is created according to specific Business Logic Requirements of an organization.

Hence, for high quality and efficient development and maintenance of an EOMS, we firstly need to define and develop some high level concepts or classes of objects such as entity profile, user profile, user content, notification, relation, category, visibility policy, media scope/bridge based manager, and list over the low level classes such as database, file, folder, path, and exception handler. Then, business object classes are derived from the aforementioned high level concepts. For some examples, brand, product, service, subscription level, downloadable, playable, viewable, department, user field, and contact are derived from entity profile class, invoice, expense, subscription, request, order, contract, support ticket,

private message, and note are derived from user content class, and customer (client), employee (collaborator), partner, entrepreneur, investor, vendor, and independent user are derived from user profile class. So, then we would be able to solve almost all of complex problems of business logic implementation within these high level classes which are gathered and organized in a high level software framework. **TPS Software Framework** is such a high level business application framework, and this is the main motivation for developing it to provide the core functionalities for developing a custom EOMS.

Overview: Architecture

There are a number of important high level concepts or classes of objects which can be considered as backbone of **TPS Software Framework**:

1) Entity and Entity Profile:

Entity is an abstract class for anything in real life that exists without considering how it is described. Then, each description provided for an Entity can be considered as an Entity Profile. For example, a product is an entity which can be described in different languages. Then, each description of a product in any language can be considered as a profile of that product. So, some attributes of a product such as its id, brand id, and price are unique regardless of how it is described in various languages. Such attributes together represent the entity view of that product, and the other attributes which are language dependent, such as its name and description, together represent the profile view of that

product.

As it can be easily understood, generally there are a number of important types of entities which can be considered and effective in an organization and its processes. They are as follows: 1) Brand, 2) Product, 3) Service, 4) Subscription Level, 5) Department, 6) User Field, 7) Contact, 8) Downloadable, 9) Playable, 10) Viewable, 11) Library, 12) User Group, 13) Task, and 14) Workflow. These entity classes extend Entity Profile class.

Some types of entities might have parent such as department that can be used for showing the departmental hierarchy of an organization.

There are also some types of entities that are not needed to be described in different languages, and therefore they do not have profile. They are as follows: 1) Currency, 2) Country, 3) Zone, 4) GeoZone, and 5) Tax Rule. Such entity types have their own specific classes which handle them singly or in a list that do not extend Entity or Entity Profile class. They extend List class instead.

Each type of entities might need some specific procedures or functions that are implemented within the class of that entity type. For example, product class needs a function for computing the stock amount of that product based on its sale and purchase history.

For general description of each of aforementioned entity types, please refer to the section "Classes: How to use them?" in this document.

2) **User and User Profile:**

User

3) **User Content:**

4) **Notification:**

5) **User Visibility Policy and Manager:**

6) **Media Scope/Bridge based Manager:**

7) **Category:**

8) **Mailing List:**

9) **Payment Method:**

10) **Shipping Method:**

11) **Relation:**

12) **List:**

13) **Object and Exception Handler:**

Classes: How to use them?

1) Entity Profile and Entities List

1-1)   Currency

1-2)   Country, Zone and GeoZone

1-3)   Tax Rate, Tax Rule, and Tax Profile

1-4)   Brand

1-5)   Product

1-6)   Service

1-7)   Subscription Level

1-8)   Department

1-9)   User Field

1-10) Contact

1-11) Downloadable

1-12) Playable

1-13) Viewable

2) User Profile

2-1) Customer (Client)

2-2) Employee (Collaborator)

2-3) Partner

2-4) Entrepreneur

2-5) Investor

2-6) Independent User

2-7) Vendor

3) User Content

3-1)   Message

3-2)   Ticket

3-3)   Request

3-4)   Order

3-5)   Contract

3-6)   Note

3-7)   Invoice

3-8)   Expense

3-9)   Subscription

3-10)   Letter

3-11)   Group Post

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4) Notification

5) Visibility Policy and Manager

4-1) All visible

4-2) By Admin

4-3) By Profile Class

4-4) Hybrid By Admin and Profile Class

6) Form, Task, and Workflow

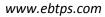# 7) Payment Method

8) Shipping Method

9) Notification

10) Integrated Media Management

11) Category

12) Relation

13) Analytics

14) Web Service

15) Utility

16) XML ZIP Backup

17) Component

18) Parameter and Element

19) Database

20) File System: File, Folder, Path, FTP

21) Exception Handler

22) Object

Investment Opportunities

Founder / Architect / Lead Developer: Okhtay Sattari

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"I started to dream and build an Electronic Organization Management System in 2008. I built and made stable the first version of this system (1.0) in March 2011. Then I extended it to the version 1.1 in August 2011. Then I started to dream and build an independent extensible PHP Framework which would work as the core of Electronic Organization Management System. I am still working to complete the second version of this framework (2.0) namely TPS Framework.

This software system is being developed under the brand name ' TPS ' that can be considered as an abbreviation form of both ' Turan Planners of Software ' and 'Toward Perfect Solutions'. TPS Business (ebtps.com or turandevelop.com) will provide technical e-business software solutions and consulting services to Entrepreneurs and Small to Medium Enterprises (SMEs).

All types of investment are welcomed for developing this software system and making it a successful commercial product. I am ready to talk with all potential investors about all possible investment opportunities, and I believe this software system and the related business can provide so considerable Return on Investment to attract and retain the investors. So, all financial propositions and consultations are welcomed and will be fully considered."