

Using a Taxonomy Management System to Achieve Distributed Governance for Taxonomy and Metadata in a Global Enterprise

Governance by Consensus Governance by Dissent

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"Successful taxonomy governance establishes long-term ownership and responsibility for taxonomies, responds to feedback from taxonomy users and assures the sustainable evolution of taxonomies in response to changes in user and business needs." *"Taxonomy governance comprises the policies, procedures, and documentation for the ongoing management and use of taxonomy."*

"...the existence of taxonomy is itself a form of governance."

Heather Hedden – Accidental Taxonomist http://accidental-taxonomist.blogspot.co.uk/2013/12/taxonomy-governance.html

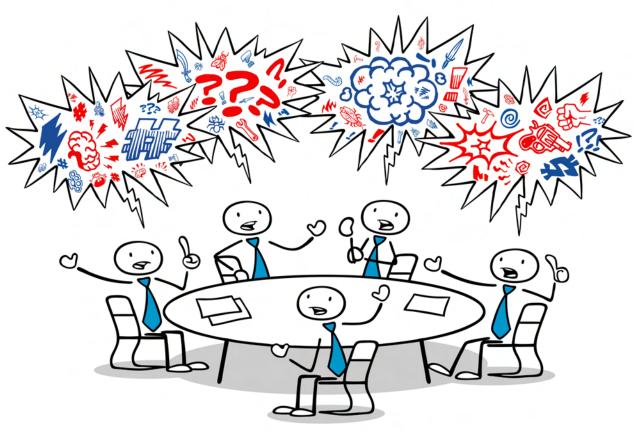


Paula Land – Strategic Content http://strategiccontent.com/introduction-to-taxonomy-governance/



Governance.

What happens when stakeholders fail to reach consensus?



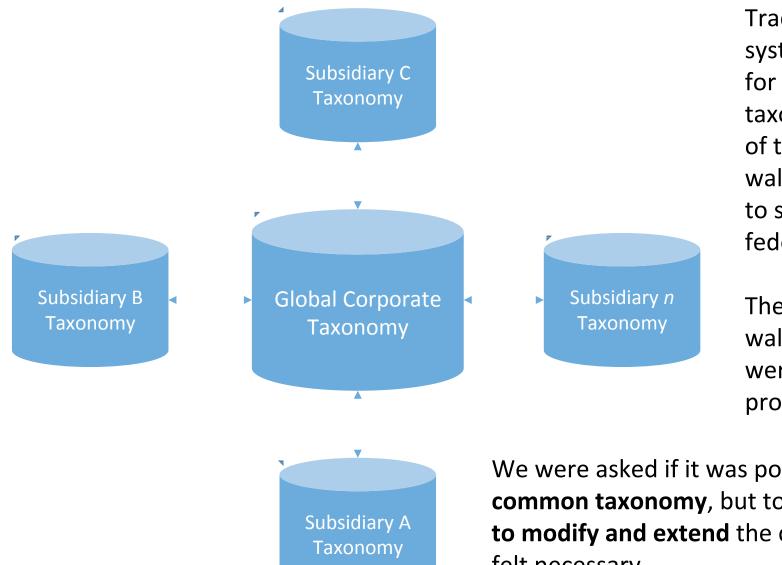
How taxonomy systems can simultaneously support harmonization and diversity

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Global corporations recognize the business value of sharing knowledge assets and they strive for search and discovery solutions that can span all corporate entities.

Sometimes, however, their subsidiaries have steadfastly rejected attempts to create universal taxonomies. They may agree 90% of the time, but for the remaining 10% consensus cannot be achieved.





Traditional knowledge organization systems and methodologies would call for each subsidiary to manage its own taxonomy independently, and for each of those taxonomies to be crosswalked to map equivalencies in order to support uniform retrieval across federated assets.

The costs to build, maintain and crosswalk hundreds of separate taxonomies were deemed, quite rightly, to be prohibitive.

We were asked if it was possible to maintain and **share a single common taxonomy**, but to also **allow subsidiaries the freedom to modify and extend** the common taxonomy in any way they felt necessary.



To achieve these goals, we built special types of semantic relationships that allow subsidiaries to point to any term in the common taxonomy and dynamically replace it with their locally preferred term.

Taskviews Search Tree Browse	A-Z Browse A	dd Reports	Tools Admin	
 Limit to Taskview Show All Display Relationship Abbreviations Highlight by Category Filter by Relationship Type American Produce Inc British Produce Ltd Global Produce Inc. Fruit Vegetables 	Object Categories Status UID Created	5117020 ddarke 7/16/2016 3:12:37 f ddarke 7/16/2016 3:20:42 f Add New Categories Delete Copy	Ini Produce Inc. Candidate; Preferred; Unlocked 20 e 7/16/2016 3:12:37 PM e 7/16/2016 3:20:42 PM Add New Subsume Categories History Delete Themore Copy Copy Children Add New Subsume Categories History Delete Add New Subsume Copy	Add/Edit Relationships Tree View Vis Limit to Taskview Show All Zucchini Top Level Parents IT Vegetables (Global Produce Inc.) Parents BT Fruit vegetables (Global Produce Inc.) Children Associations
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Cucumbers Eggplant Peppers	El Administrative Attributes: Approval: Candidate Workflow: Normal			
Squash Tomatoes Zucchini Leaf vegetables	Language: Locked: NIT: BTN:	English 📴 Unlocked 😳 Yes 💿 No Yes 💿 No		
 <u>Root vegetables</u> <u>Seed vegetables</u> <u>Stem vegetables</u> <u>Tuber vegetables</u> 				A S

- In addition to relabelling terms, the subsidiaries needed a way to extend the taxonomies to cover their unique products, services and business processes.
- This additional terminology is stored in subsidiary-specific extension-vocabularies, which allow each subsidiary to attach narrower concepts or trees of concepts to any node in the common taxonomy.

A software tool called dynamic term substitution blends the global taxonomy with the subsidiary substitutions and extensions to create a localized view



Global Produce Inc.

Fruit NT Summer fruits NT Berries NT Cherries NT Grapes NT Melons NT Peaches NT Pears NT Tropical fruits NT Bananas NT Kiwi fruit NT Mangos NT Papayas NT Passion fruit **NT Winter fruits** NT Apples NT Citrus fruits NT Grapefruit NT Lemons NT Limes NT Oranges NT Pears Vegetables NT Flower vegetables NT Broccoli NT Brussels sprouts NT Cauliflower **NT Fruit vegetables** NT Avocados NT Cucumbers NT Eggplant NT Peppers NT Squash NT Tomatoes NT Zucchini NT Leaf vegetables NT Cabbage NT Chicory NT Cilantro NT Kale NT Lettuce NT Root vegetables NT Beets NT Carrots NT Onions NT Scallion NT Radishes NT Rutabaga NT Turnips NT Seed vegetables NT Corn NT Garden peas NT Green beans NT Snow peas NT Stem vegetables NT Artichoke NT Asparagus NT Celery NT Tuber vegetables NT Potatoes NT Sweet potatoes NT Yams

British Extensions File

Aubergine (British Produce Ltd) UK>Glob Eggplant (Global Produce Inc.) Beetroot (British Produce Ltd) UK>Glob Beets (Global Produce Inc.) Coriander (British Produce Ltd) UK>Glob Cilantro (Global Produce Inc.) Courgette (British Produce Ltd) UK>Glob Zucchini (Global Produce Inc.) Endive (British Produce Ltd) UK>Glob Chicory (Global Produce Inc.) Leeks (British Produce Ltd) BT Stem vegetables (Global Produce Inc.) Mange tout (British Produce Ltd) UK>Glob Snow peas (Global Produce Inc.) Parsnips (British Produce Ltd) BT Root vegetables (Global Produce Inc.) Spring onion (British Produce Ltd) UK>Glob Scallion (Global Produce Inc.) Swede (British Produce Ltd) UK>Glob Rutabaga (Global Produce Inc.) Sweet corn (British Produce Ltd) UK>Glob Corn (Global Produce Inc.)

British Produce Ltd.

Fruit NT1 Summer fruits NT2 Berries NT2 Cherries NT2 Grapes NT2 Melons NT2 Peaches NT2 Pears NT1 Tropical fruits NT2 Bananas NT2 Kiwi fruit NT2 Mangos NT2 Papayas NT2 Passion fruit **NT1 Winter fruits** NT2 Apples NT2 Citrus fruits NT3 Grapefruit NT3 Lemons NT3 Limes NT3 Oranges NT2 Pears Vegetables NT1 Flower vegetables NT2 Broccoli NT2 Brussels sprouts NT2 Cauliflower **NT1 Fruit vegetables** NT2 Aubergine NT2 Avocados NT2 Courgette NT2 Cucumbers NT2 Peppers NT2 Squash NT2 Tomatoes NT1 Leaf vegetables NT2 Cabbage NT2 Coriander NT2 Endive NT2 Kale NT2 Lettuce NT1 Root vegetables NT2 Beetroot NT2 Carrots NT2 Onions NT3 Spring onion NT2 Parsnips NT2 Radishes NT2 Swede NT2 Turnips NT1 Seed vegetables NT2 Garden peas NT2 Green beans NT2 Mange tout NT2 Sweet corn NT1 Stem vegetables NT2 Artichoke NT2 Asparagus NT2 Celery NT2 Leeks NT1 Tuber vegetables NT2 Potatoes NT2 Sweet potatoes NT2 Yams

Term Substitutions

Term Additions



Global Produce Inc.

Fruit NT Summer fruits NT Berries NT Cherries NT Grapes NT Melons **NT Peaches** NT Pears NT Tropical fruits NT Bananas NT Kiwi fruit NT Mangos NT Papayas NT Passion fruit **NT Winter fruits** NT Apples **NT Citrus fruits** NT Grapefruit NT Lemons NT Limes NT Oranges NT Pears Vegetables NT Flower vegetables NT Broccoli NT Brussels sprouts NT Cauliflower NT Fruit vegetables NT Avocados NT Cucumbers NT Eggplant NT Peppers NT Squash NT Tomatoes NT Zucchini NT Leaf vegetables NT Cabbage NT Chicory NT Cilantro NT Kale NT Lettuce NT Root vegetables NT Beets NT Carrots NT Onions NT Scallion NT Radishes NT Rutabaga NT Turnips NT Seed vegetables NT Corn NT Garden peas NT Green beans NT Snow peas NT Stem vegetables NT Artichoke NT Asparagus NT Celery NT Tuber vegetables NT Potatoes NT Sweet potatoes

NT Yams

Singapore Extensions File

Asian Pear (Singapore Produce Pte Ltd) BT Pears (Singapore Produce Inc.) Dragon fruit (Singapore Produce Pte Ltd) BT Tropical fruits (Global Produce Inc.) Durian (Singapore Produce Pte Ltd) BT Tropical fruits (Global Produce Inc.) Longan (Singapore Produce Pte Ltd) BT Tropical fruits (Global Produce Inc.) Rambutana (Singapore Produce Pte Ltd) BT Tropical fruits (Global Produce Inc.) Singapore Produce Pte. Ltd. Fruit NT1 Summer fruits NT2 Berries NT2 Cherries NT2 Grapes NT2 Melons NT2 Peaches NT2 Pears NT3 Asian Pear NT1 Tropical fruits NT2 Bananas NT2 Dragon fruit NT2 Durian NT2 Kiwi fruit NT2 Longan NT2 Mangos NT2 Papayas NT2 Passion fruit NT2 Rambutana NT1 Winter fruits NT2 Apples NT2 Citrus fruits NT3 Grapefruit

NT3 Lemons

NT3 Oranges

NT3 Asian Pear

NT1 Flower vegetables

NT2 Brussels sprouts

NT3 Limes

NT2 Pears

NT2 Broccoli

NT2 Cauliflower

NT2 Avocados

NT2 Eggplant

NT2 Peppers

NT2 Squash

NT2 Tomatoes

NT1 Leaf vegetables

NT1 Root vegetables NT2 Beets

NT2 Zucchini

NT2 Cabbage NT2 Chicory

NT2 Cilantro

NT2 Lettuce

NT2 Carrots

NT2 Onions

NT3 Scallion

NT2 Radishes

NT2 Rutabaga

NT1 Seed vegetables

NT2 Garden peas

NT2 Green beans

NT1 Stem vegetables

NT2 Snow peas

NT2 Artichoke

NT2 <u>Celery</u> NT1 <u>Tuber vegetables</u> NT2 <u>Potatoes</u> NT2 <u>Sweet potatoes</u>

NT2 Yams

NT2 Asparagus

NT2 Turnips

NT2 Corn

NT2 Kale

NT2 Cucumbers

NT1 Fruit vegetables

Vegetables

Term Substitutions

Term Additions



American Extensions Vocabulary

Bok Choy (American Produce Inc) BT Leaf vegetables (Global Produce Inc.) Guava (American Produce Inc) BT Tropical fruits (Global Produce Inc.) Pumpkin (American Produce Inc) BT Seed vegetables (Global Produce Inc.)

British Extensions Vocabulary

Aubergine (British Produce Ltd) UK>Glob Eggplant (Global Produce Inc.) Beetroot (British Produce Ltd) UK>Glob Beets (Global Produce Inc.) Coriander (British Produce Ltd) UK>Glob Cilantro (Global Produce Inc.) Courgette (British Produce Ltd) UK>Glob Zucchini (Global Produce Inc.) Endive (British Produce Ltd) UK>Glob Chicory (Global Produce Inc.) Leeks (British Produce Ltd) BT Stem vegetables (Global Produce Inc.) Mange tout (British Produce Ltd) UK>Glob Snow peas (Global Produce Inc.) Parsnips (British Produce Ltd) BT Root vegetables (Global Produce Inc.) Spring onion (British Produce Ltd) UK>Glob Scallion (Global Produce Inc.) Swede (British Produce Ltd) UK>Glob Rutabaga (Global Produce Inc.) Sweet corn (British Produce Ltd) UK>Glob Corn (Global Produce Inc.)

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Term Substitutions

Term Additions

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NT Berries

NT Grapes

NT Melons

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NT Mangos

NT Papayas

NT Winter fruits

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NT Green beans

NT Stem vegetables

NT Tuber vegetables

NT Sweet potatoes

NT Snow peas

NT Artichoke

NT Celery

NT Yams

NT Potatoes

NT Asparagus

NT Turnips

NT Corn

NT Kale

NT Leaf vegetables

NT Root vegetables

NT Peppers

NT Squash

NT Cucumbers

NT Fruit vegetables

Vegetables

NT Grapefruit

NT Cherries

American Produce Inc.

Fruit

NT1 Summer fruits NT2 Berries

NT2 Cherries

NT2 Grapes

NT2 Melons

NT2 Pears

NT2 Guava

NT2 Peaches

NT1 Tropical fruits

NT2 Bananas

NT2 Kiwi fruit

NT2 Mangos

NT2 Papayas

NT1 Winter fruits

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NT1 Leaf vegetables

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Vegetables

NT3 Grapefruit

Produce Inc. B

British Produce Ltd.

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NT2 Yams

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- The model encourages a workflow of **adopt first** and **adapt second**.
- It supports dissenting voices and **diversity in the way that knowledge assets can be described** and organized.
- At the same time, it supports knowledge sharing and **uniform enterprise wide search and discovery**.
- It achieves these goals without the cost of building, maintaining and mapping redundant taxonomy structures – that which is common may be shared and only exceptions and extensions incur extra effort.





Case Study Discussion Topics

- When is it right to build a universal taxonomy
- When should different user communities be allowed to curate their own terminology or hierarchical structures
- How can you support diversity without compromising universal search or incurring unnecessary costs