

Business Rules

Grist Magazine Relationship Database Project

Larry Bednar

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Purpose

This document lists rules of business operation that are relevant to the use of the product developed during the project.

[LB – (to Grist staff) Please note that all the “business rules” here represent rules about the business’s operations using data. “Business rules” are rules that are NOT changed simply because a system implementer chose a different way of implementing the system (MS-Access vs. FileMaker, different programming approach, etc.). I’ve tried to make a good effort to define all the business rules that are obvious to me. Please review and verify the correctness of those I’ve stated, and make additions that you feel are needed to properly represent your business operations as they relate to storage and use of data in the relationship database.

If I have comments or thoughts I’d like to you consider, I’ve entered them in red-colored text below...]

Business Rules

The following tables lists rules of business operation relevant to database design.

ID	Rule Definition	Type of Rule*	Static/ Dynamic**	Source
Con-01	Each contact must be classified as either a conversation or a letter (includes emails) – not both.	Structural fact	Static	
Con-02	Each contact may be associated with several subject categories	Structural fact	Static	
ConSubj-01	Each contact subject category may be used only once with each contact	Action restricting	Static	
Deliv-01	Successful delivery attempts are not tracked in the system	Structural fact	Static	J.Stahl 26Jun2003
Deliv-02	A delivery attempt record is created each time an attempted delivery results in a failure.	Action triggering	Static	
Don-01	Each donation may be associated with either a single person or a single organization – not to both.	Action restricting	Static	

ID	Rule Definition	Type of Rule*	Static/ Dynamic**	Source
Don-02	A “matching fund” donation must have an “original donor” specified.	Structural fact	Dynamic	
Don-03	A “Proxy donation” must have an “original donor” specified	Structural fact	Dynamic	
Don-04	Composite donations representing several “donors” are entered as separate donations for each individual donor represented. (examples: “proxy donations” providing a single check for donations from several individuals, “matching fund” donations provided by an employer to match donations provided by several employees, etc.)	Structural fact	Static	
Email-01	Each email address may be associated with several active subscriptions to different publications simultaneously.	Structural fact	Static	
Email-02	Each email address may have only one active subscription to each publication at one time (i.e. one email address cannot have multiple subscriptions to the same Grist publication at the same time). Multiple subscriptions to a publication may be associated with a single email address if they represent non-overlapping time periods.	Action restricting	Dynamic	
Email-03	An email address record is created when a subscription is established and a pre-existing record for that email address does not exist in the system	Action triggering	Dynamic	
Email-04	An email address record is created when an address is obtained from a subscription source if a record for the address is not already present in the system	Structural fact	Static	
OptIn-01	An opt-in record is created any time the email address of a potential subscriber is obtained from a marketing partner in response to an individual’s indication of interest in Grist or a Grist publication. This is true regardless of whether a pre-existing subscription is present, regardless of whether the same email address has been obtained from multiple sources, and regardless of whether a pre-existing subscription is present.	Action triggering	Dynamic	

ID	Rule Definition	Type of Rule*	Static/ Dynamic**	Source
OptIn-02	Data about potential subscribers from an information source need not be maintained permanently. After new subscriptions, update of personal profiles, etc. resulting from application of that data are stored in the system, there is no requirement to maintain permanent records of the full data provided. [LB – Is there a desire to keep track of summary statistics such as how many possible subscribers were provided by an information source ? How many of these resulted in new subscriptions? Similar summary statistics?]	Structural fact	Static	
OptIn-03	For email addresses provided directly to Grist on their web site, etc. an opt-in record is created after a communication is sent to that email address requesting confirmation, and after a confirmation is received.	Action restricting	Dynamic	
Org-01	Each organization may have several web sites associated with it.	Structural fact	Static	
Org-02	Each organization may be associated with several publications produced by their organization	Structural fact	Static	
Org-03	Each organization may be associated with several profiles of different types.	Structural fact	Static	
Org-04	Each organization may be associated with several organization class categories	Structural fact	Static	
OrgCl-01	Each organization class category may be used only once for each organization.	Action restricting	Static	
OrgDnr-01	Each organizational donor profile may have several issue categories associated with it.	Structural fact	Static	
OrgDnrIss-01	Each issue category may be used only once with each organizational donor profile.	Action restricting	Dynamic	
OrgPub-01	Each unique publication produced by an organization may be represented only once in association with each organization	Action restricting	Dynamic	
OrgWeb-01	Each unique organizational web site or page may be used only once	Action restricting	Dynamic	

ID	Rule Definition	Type of Rule*	Static/ Dynamic**	Source
	with each organization.			
Per-01	Each person may be associated with several profiles of different types.	Structural fact	Static	L.Bednar proposal
Per-02	Each person may be associated with several individual class categories	Structural fact	Static	
Per-03	Each person may be associated with several email address records.	Structural fact	Static	
PerCI-01	Each individual class category may be used only once for each person.	Action restricting	Static	
Phone-01	Each phone record may be assigned to either an organization or a person – not to both. Several phone records may contain the same value for “phone number”.	Action restricting	Static	
Prof-01	Each profile may be of one and only one type (e.g. “organizational donor”, “volunteer”,...)	Structural fact	Static	
Prof-02	Each profile type may be used only once with each “relationship”	Action restricting	Dynamic	
Subn-01	Active subscriptions are not modified when related opt-in records are created in response to information provided by a subscription source about potential subscribers. (For example, a “subscription source” may provide information for a “potential subscriber” who is already a subscriber. This results in no alteration of the active “subscription” record.)	Structural fact	Static	
Subn-02	Subscriptions do not have a set duration – they end only when explicitly requested by the subscriber, or when delivery attempts fail under conditions that indicate a permanent inability to deliver the publication.	Structural fact	Dynamic	
Subn-03	A subscription is cancelled if a “hard bounce” is obtained in response to an email delivery attempt.	Inference	Dynamic	
Subn-06	A subscription is created when an opt-in record is received from a marketing partner, etc. resulting from the potential subscriber	Action restricting	Dynamic	

ID	Rule Definition	Type of Rule*	Static/ Dynamic**	Source
	explicitly indicate an interest in Grist by clicking a button on a marketing partner’s web site, etc. and if no subscription is already in effect for the opt-in email address.			
Subn-07	A subscription is cancelled if 3 successive “soft bounces” results from delivery attempts on 3 non-consecutive days.	Action triggering	Dynamic	
Subn-08	A subscription is created for an email address when the subscriber has indicated interest through direct interactions with Grist’s own web site (clicking a button, etc.) – but only after a query is sent to that email address and a confirmation of interest is received.	Action restricting	Dynamic	
Subn-09	For email addresses provided directly to Grist on their web site, etc. by users who express an interest in Grist or Grist publications, a subscription is only created after a communication is sent to that email address requesting confirmation, and after a confirmation is received.	Action restricting	Dynamic?	
SubnConf-01	A subscription confirmation request is sent to a potential subscriber when their email address is obtained from an information source and they are not a preexisting subscriber to the publication in question.	Action triggering	Dynamic	
SubrProf-01	Each subscriber profile may be associated with several memberships	Structural fact	Static	
SubrProfMbr-01	Each membership may be used only once with each subscriber profile	Action restricting	Dynamic	
VolProf-01	Each volunteer profile may have several volunteer skill categories associated with it.	Structural fact	Static	
VolSkill-01	Each volunteer skill category may be used only once for each volunteer profile.	Action restricting	Static	

*Values used for “Type of Rule” include:

- “Structural Fact” – facts or conditions that must be true.
- “Action Restricting” – prohibits one or more actions based on a condition.
- “Action Triggering” – instigates an action when one or more conditions become true.
- “Inference” – draws a conclusion when one or more conditions become true
- “Calculation” – calculates a value given a set of other values.

**Values used for “Static/Dynamic” include:

- “Static” – unchanging in normal operation, not dependent upon calculations or inferences derived from attributes entered into the system as data characterizing data subjects such as “organizations”, “person”, “donation”, “publication” etc. However, these rules may be subject to change if business rules are altered.
- “Dynamic” – application of rule depends on calculations or inferences derived from attributes tracked within the system as data characterizing data subjects such as “organizations”, “person”, “donation”, “publication” etc.

Abbreviations used for Ids:

- “Con” – rules related to “Contact”
- “ConSubj” – rules related to “contact subject”
- “Deliv” – rules related to “delivery attempt”
- “Don” – rules related to “donation”
- “Email” – rules related to “email”
- “Org” – rules related to “Org”
- “OrgCl” – rules related to “Org class”
- “OrgDnr” – rules related to “org donor”
- “OrgDnrIss” – rules related to “org donor issue”
- “OrgWeb” – rules related to “org website”
- “Per” – rules related to “person”
- “PerCl” – rules related to “person indiv class”
- “Phone” – rules related to “phone”

“Pub” – rules related to “publication”

“Prof” – rules related to “profile”

“Subn” – rules related to “Subscription”

“SubnConf” – rules related to “subscription confirmation”

“SubrProf” – rules related to “subscriber profile”

“SubnSrc” – rules related to “Subscription Source”

“VolProf” – rules related to “Volunteer profile”

“VolSkill” – rules related to “Vounteer Skill”