



**Business  
Rule  
Solutions, LLC**

# Basic RuleSpeak<sup>®</sup> Guidelines

## *Do's and Don'ts in Expressing Natural-Language Business Rules in English*

*This original English version developed by ...*

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*RuleSpeak was one of three reference notations used in the creation of SBVR,  
Semantics of Business Vocabulary and Business Rules,  
and is consistent with that standard.*

*RuleSpeak<sup>®</sup> is a technique of Proteus<sup>®</sup> –  
the BRS Methodology for Business Analysis and Business Rules*

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# Basic RuleSpeak<sup>R</sup> Guidelines

## *Do and Don'ts in Specifying Natural-Language Business Rules in English*

### **What RuleSpeak is**

*RuleSpeak* is a set of practical guidelines for ...

- ↪ Expressing Business Rules in clear, unambiguous, well-structured English.
- ↪ Improving communication about Business Rules among business people, business analysts, and IT professionals.
- ↪ Bridging the gap between the language of business policies and legal obligations, and IT specifications oriented to system design and implementation.
- ↪ Avoiding common pitfalls associated with expressing guidance.
- ↪ Retaining product/service know-how in a manageable, reusable form.

In the words of an experienced practitioner ...

*“Another chronic problem is the difficulty of finding a common language to assure ... business clients, analysts and developers could truly communicate. Asking clients to sign-off on a project is meaningless if the proposed structure or logic is presented in a form that they are not trained to understand. For developers, the communication medium must allow sufficient precision to support system design and the creation of code.”*

*RuleSpeak* provides the answer. *RuleSpeak* can be understood and “spoken” by large segments of the business community (or larger communities of practice). Its pragmatic guidelines also aid analysts in clarifying and expressing the business meaning of even very complex decision logic.

### **What level of specification RuleSpeak is for**

Business guidance can be expressed at any of three levels, as outlined below. *RuleSpeak* is aimed at the second of these levels, *Practicable Statements*, which represents the critical interpretation stage between the other two.

**Governing Statement:** A statement in a law, act, statute, regulation, contractual obligation, binding agreement, business policy, or similar communication or directive.

**Comment:** Governing Statements can be aimed at some or all of the following:

- ↪ Guiding or constraining business operations to align them with strategy or tactics.
- ↪ Limiting exposure to risks or threats.
- ↪ Ensuring proper construction and use of product/services.

- ↳ Regulating or coordinating interactions between parties.
- ↳ Operating within the law or regulatory strictures.

Governing Statements usually must be interpreted into one or more Practicable Statements, using standard vocabulary, such that the guidance can be deployed and applied within actual business processes or decision-making tasks.

**Practicable Statement:** A declarative statement in well-structured English, based on standard vocabulary and suitable for direct use by workers or other authorized parties within some operational business process(es) or decision-making task(s).

**Comment:** A Practicable Statement should not require additional interpretation to be applied directly. Practicable Statements are generally interpreted from Governing Statements, and then if to be automated, translated into Implementation Statements. Practicable Statements may also be reverse-engineered from legacy systems to capture, clarify and analyze business intent.

**Implementation Statement:** A statement specified in a form suitable for designing or implementing some automated system(s), possibly using a rule engine, programming language, application generator, or similar technology.

**Comment:** Implementation Statements are generally expressed in a form optimized for implementation under some class of platform, rather than for communication with and among business people.

# 1.0 Basic Guidelines in RuleSpeak

## 1.1 Business Rule Statements should be non-procedural

Sample of “Business Rules” from a Recent Software Vendor White Paper:

*Check the product number in database SRU [the Sandals ‘R’ Us database].  
If the product number is equal to 422 [the part number of flip-flops]  
and the product description is equal to “plastic flip-flops”,  
then set the new product number in database ASC  
[The Athens Sandal Company database] equal to 1547  
and set the product description equal to “Fun-in-the-Sun Flip-Flops”  
else if the product number in database is equal to 423 through 495  
[the part numbers of all orthopedic sandals]  
then set the new product number equal to 1647  
and set the product category equal to “Good for You, Too Sandals”  
else if ...*

**Comment:** These specifications are given in the form of procedural, “flow-through” logic, rather than a practicable, declarative form natural for human communication. Also, words like “set” and “database” clearly indicate these specifications to be Implementation Statement(s).

**Caution:** Avoid any procedural form to express Business Rules. Such forms do not communicate business intent very well; rapidly become hard to follow; and do not isolate *re-usable* units of decision logic. *RuleSpeak* strongly discourages their use.

## 1.2 Business Rule Statements should be not be inscrutable

Sample from the menu of a restaurant in Fort Bragg, NC:

*These items may or may not be available at all times, and sometimes not at all and other times all the time.*

**Comment:** The most basic test for a good Business Rule Statement is that it can be readily understood by any qualified worker – and always with the same interpretation. The statement above fails in that regard.

## 1.3 Enforcement and evaluation are separate concerns

**Comment:** Anything pertaining to evaluation or enforcement of a Business Rule should be documented separately from the Business Rule Statement itself. A Business Rule Statement should express only the ‘what’ of the Business Rule, *not* anything about:

- ↪ *How* it is to be evaluated or enforced.
- ↪ *Where* it is to be evaluated or enforced (e.g., within what implementation components).
- ↪ *Who* (i.e., which actors) are responsible for evaluating or enforcing it.
- ↪ *When* (i.e., what events should cause) it to be evaluated or enforced.
- ↪ *Why* it needs to be evaluated or enforced (i.e., its motivation or business purpose).

**Rule:** *A hard hat must be worn in a construction site.*

**Comment:** This statement includes no mention of *how*, *where*, *when* or *why* the Business Rule should be evaluated or enforced, or *who* is responsible for that. Specification about any of those concerns can be made separately. Removing the *how*, *where*, *who*, *when*, and *why* of evaluation or enforcement produces Business Rule Statements focused exclusively on decision logic, the *what*. Business Rules specified in this way are highly understandable and more re-usable since they are not tied to any specific regime of evaluation or enforcement.

## 2.0 Basic Wording in RuleSpeak

### 2.1 Omitting a Rule Keyword is not good

**Comment:** Every Business Rule Statement should include “must” or “only”. Other phrases or words to indicate that a statement is meant to express a Business Rule should be avoided. This practice promotes consistency and sharpens focus.

**Rule:** *A freshman is not allowed to participate in an honors club.*

**Revised Rule:** *A freshman must not participate in an honors club.*

**Rule:** *An order is strictly required to indicate the customer who places it.*

**Revised Version:** *An order must indicate the customer who places it.*

### 2.2 “Can” is not good

**Example:** *A customer can purchase a pesticide from a supplier.*

**Comment:** This statement merely expresses some fact(s). A Business Rule always removes some degree of freedom.

**Rule:** *A customer may purchase a pesticide from a supplier only if the supplier sells that pesticide.*

**Comment:** The “only” acts to remove a degree of freedom, thereby producing a Business Rule Statement.

**Ask:** Does a statement simply express capacity (e.g., *can ...*)?

↳ Or does it remove some degree of freedom (e.g., *may ... only*)?

### 2.3 Extra words for emphasis are not good

**Comment:** Words and phrases added for emphasis just add clutter. They should be avoided to keep Business Rule Statements lean and succinct.

**Rule:** *A shipment must have a status with no exceptions.*

**Revised Version:** *A shipment must have a status.*

**Comment:** The revised version permits no exceptions since there are no selective or conditional circumstances mentioned.

**Rule:** *A freshman must not participate in an honors club at any time.*

**Revised Rule:** *A freshman must not participate in an honors club.*

**Comment:** Assume “at any time” unless the Business Rule applies only during certain timeframe(s). (If so, these timeframes should be stated explicitly.)

**Rule:** *A programmer must always work on a system.*

**Revised Version:** *A programmer must work on a system.*

**Comment:** Assume “always” unless the Business Rule applies only during certain timeframe(s). (If so, these timeframes should be stated explicitly.)

## 3.0 Facts in RuleSpeak

### 3.1 Free form is not good

**Comment:** The form of a Business Rule Statement should follow the form (wordings) of the relevant fact(s). The following example illustrates.

**Facts:** *customer places order*  
*customer holds account*

**Rule:** *A customer may place an order only if the customer holds an account.*

**Comment:** The Business Rule Statement follows the form of the facts exactly.

**Caution:** Know your terms and facts and their meanings. A sound, well-organized business vocabulary is critical to expressing Business Rules well. A structure for the underlying terms and facts – i.e., a Fact Model – is an essential tool in this regard.<sup>1</sup> Using the nouns and verbs given by the Fact Model to express Business Rules helps to ensure consistency and to avoid ambiguities. Achieving these goals becomes ever more important as the number of Business Rules grows (i.e., as you scale up).

### 3.2 “To have” is often not good

**Rule:** *A team must have a manager.*

**Comment:** The verb “to have” is imprecise when used to express a relationship between independent concepts. It obscures true meaning.

**Ask:** What does “to have” mean?

- ↪ To be *managed* by a manager?
- ↪ To be *sponsored* by a manager?
- ↪ To be *approved* by a manager?

#### Revised Version

**Fact:** team *is managed by* manager

**Rule:** *A team must be managed by a manager.*

**Comment:** Expressive, succinct verbs should be used to state Business Rules about independent concepts.

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<sup>1</sup> Refer to *Business Rule Concepts*, 3<sup>rd</sup> Edition, by Ronald G. Ross, 2009. Available via [www.BRSolutions.com](http://www.BRSolutions.com).

**Caution:** Any use of the verb “to have” should be limited to direct properties – for example, account *has* outstanding balance.

### 3.3 Missing Facts are not good

**Rule:** *An order must not be shipped if the outstanding balance exceeds credit authorization.*

**Comment:** This Business Rule Statement is highly ambiguous and therefore easily misinterpreted.

**Ask:** Outstanding balance *of what?*

↳ order? ...customer? ...account? ...shipment?

**Ask:** Credit authorization *of what?*

↳ order? ...customer? ...account? ...shipment?

#### Revised Version

**Facts:** customer *places* order  
customer *has* credit authorization (property)  
customer *holds* account  
account *has* outstanding balance (property)

**Rule:** *An order must not be shipped if the outstanding balance of the account held by the customer that placed the order exceeds the credit authorization of the customer.*

**Comment:** Ambiguities *inevitably* result when relevant facts are omitted from a Business Rule Statement. Identify all the relevant facts, and carefully include them in the Business Rule Statement.

**Caution:** Develop a Fact Model early on. Otherwise your efforts to disambiguate Business Rule Statements will produce inconsistent and often faulty results.

## 4.0 Subjects in RuleSpeak

### 4.1 Starting with 'if' is not good

**Rule:** *If an employee is retired, then he must not be assigned an employment counselor.*

**Revised Version:** *A retired employee must not be assigned an employment counselor.*

**Comment:** Each Business Rule Statement should start with an appropriate subject. Beginning sentences that way is natural for business people. If qualification (i.e., an "if" clause) is necessary, it can be placed at the end of the sentence.

**Caution:** Remember that many Business Rules do not have a natural 'then' part.

**Rule:** *An employee must have a name.*

**Comment:** Any 'then' part of this Business Rule would have to do with evaluation (e.g., in a system) or enforcement. Such specification, if any, should be given apart from the Business Rule Statement itself.

### 4.2 Starting with a timeframe is not good

**Rule:** *By the close of registration, a student must be enrolled in at least 2 courses.*

**Revised Version:** *A student must be enrolled in at least 2 courses by the close of registration.*

**Comment:** If qualification by some timing criteria is necessary, it can be placed at the end of the sentence.

### 4.3 Plural subjects are not good

**Rule:** *Programmers must work on a system.*

**Comment:** This statement can be easily misinterpreted. Does the Business Rule apply to every programmer?

**Revised Version:** *A programmer must work on a system.*

**Comment:** This revised version indicates explicitly that the Business Rule applies to every programmer.

**Rule:** *Freshmen must not participate in an honors club.*

**Comment:** Business Rules apply at the instance level. Certain kinds of ambiguity can be easily avoided simply by placing the subject of the sentence in the singular form.

**Revised Rule:** *A freshman must not participate in an honors club.*

**Comment:** In *RuleSpeak*, the article “a(n)” preceding the subject at the beginning of a statement is always interpreted to mean “each”. In the sentence above, for example, the Business Rule is assumed to apply to *each* student. For clarity, “each” can be substituted for the beginning “a(n)”, as in the following revision.

**Revised Rule:** *Each freshman must not participate in an honors club.*

#### 4.4 Actor subjects are frequently not good

**Rule:** *A customer may make a withdrawal only if their account is active.*

**Ask:** Only the customer?

- ↪ What about pre-authorized third parties?
- ↪ What about the bank itself?
- ↪ What about other actors?

**Revised Version:** *A withdrawal for an account may be made only if the account is active.*

**Comment:** A Business Rule Statement indicating an actor as its subject should be scrutinized closely. Does the Business Rule really pertain only to that actor? Often, the answer is no. If not, substitute a non-actor subject (e.g., withdrawal, as above).

**Caution:** Be careful when harvesting Business Rules from processes, procedures or use cases. There is a natural tendency to reference the actor you happen to be thinking about at the time. But the scope or coverage of the decision logic is often not limited to just that actor.

#### 4.5 Non-numeric subjects for numeric thresholds is not good

**Comment:** If a Business Rule establishes a numeric threshold, the subject should be numeric too.

**Rule:** *A course section must not include more than 30 seats.*

**Comment:** This Business Rule involves the numeric threshold “30 seats”. The subject, course section, however is not numeric. This mismatch should be corrected, as follows.

**Revised Version:** *The number of seats for a course section must not exceed 30.*

**Comment:** This Business Rule presumes the ability to count the number of seats in a course section, a very simple calculation. In *RuleSpeak*, the subject of any Business Rule Statement specifying a calculation should be the name of what is being computed.

**Rule:** *A course must not involve more than 5 teachers and advisors combined.*

**Comment:** This Business Rule involves the numeric threshold “5 teachers and advisors”. The subject, course, however is not numeric. This mismatch should be corrected, as follows.

**Revised Version:** *The combined total of teachers who teach a course, and advisors who advise that same course, must not exceed 5.*

#### **4.6 Missing subjects are not good**

Sample from Tilly’s Restaurant, Alameda, CA:

*No less than two people in booths between 9 AM and 1 PM.*

**Comment:** This specification lacks a subject. (It is also not a complete sentence.)

**Revised Version:** *A booth must not be occupied by a party of one person between 9 AM and 1 PM.*

**Comment:** Every Business Rule Statement should have a clear subject. Identifying an appropriate subject is an important step in moving from informal expression of a Business Rule, in which context can often be assumed, to fuller expression. Such refinement also usually leads to a more exacting result. For example, Tilly’s would probably accept there being *no one* in any given booth between 9 AM and 1 PM (i.e., *zero* number of people). The revised version so indicates.

#### **4.7 Imperatives are not good**

**Rule:** *Don’t ship orders if the outstanding balance of the order exceeds credit authorization for that order.*

**Comment:** Giving guidance in the imperative form works well where context is clear, for example:

- ↪ Postings – e.g., near a swimming pool, “Walk, don’t run.”
- ↪ Direct communication between people – e.g., “Don’t hesitate to ask.”
- ↪ Instructions for or within procedures. (Such is probably the case for the sample above).

Business Rule Statements, in contrast, must stand on their own, so they can be interpreted correctly *out* of context.

**Ask:** What business *term* is an appropriate subject for the Business Rule?

**Revised Version:** *An order must not be shipped if the outstanding balance of the order exceeds credit authorization for that order.*

## 5.0 Readability in RuleSpeak

### 5.1 Non-specific qualification is not good

**Rule:** *A project team member must not be rotated off the project until finished.*

**Ask:** What does “until finished” qualify?

- ↪ The *project team member* is finished?
- ↪ The *project* is finished?

**Revised Version:** *A project team member must not be rotated off the project until the project is finished.*

**Rule:** *A purchase order must be approved by at least two managers during a snowstorm.*

**Ask:** What does “during a snowstorm” qualify?

- ↪ *Approved* during a snowstorm?
- ↪ A purchase order *taken* during a snowstorm?

**Revised Version:** *A purchase order taken during a snowstorm must be approved by at least two managers.*

### 5.2 Conjunctions are often not good

**Rule:** *A project must be considered active if it has manager, a budget, or a sponsor.*

**Ask:** How many of these three things?

- ↪ At least one?
- ↪ Exactly one?
- ↪ What if the threshold changes to “any 2 of the 3”?

**Revised Version:** *A project must be considered active if at least one of the following is true:*

- *It has a manager.*
- *It has a budget.*
- *It has a sponsor.*

**Comment:** The “or” conjunction has been eliminated by listing the conditions as bullet items, then making the number of required conditions explicit (i.e., “at least one”). The *RuleSpeak* keyword “the following” is used to set off the list. This approach avoids ambiguity and allows for easier modification.

**Caution:** Avoid long strings of “and-ed” and “or-ed” conditions. They can be extremely hard to follow. Eliminate all significant conjunctions in a

Business Rule Statement following the *RuleSpeak* guidelines above, using indentation for separate bullet lists as necessary.

### 5.3 “Etc.” is not good

**Rule:** *A territory must not include any non-candidate traditional gas station if it includes any ultra-service or food outlet; must not include any ultra-service if it includes any non-candidate traditional gas station or food outlet; etc.*

**Comment:** The business intent of this statement is murky at best. The “etc.” provides no useful clarification.

**Revised Version:** A territory must not include more than one of the following:

- Non-candidate traditional gas station.
- Ultra-service.
- Food outlet.

**Comment:** This revised version uses *RuleSpeak*'s bullet list convention to reveal true business intent. In the process, the “etc.” is eliminated.

**Caution:** Use of “etc.” in a statement often indicates lack of a business term covering the entire set of things relevant to the Business Rule. Consider that situation to be a business vocabulary problem.

## 6.0 Agility in RuleSpeak

### 6.1 Twosome words are not good

**Rule:** *A shipment must be held if either payment has not been received or the customer's security clearance has not been verified.*

**Comment:** The word “either” suggests that there are two conditions. In the future, however, other conditions could become relevant. The form of a Business Rule Statement should not involve any word or structure tending to make adding new conditions (or removing existing ones) more difficult.

**Revised Version:** *A shipment must be held if any of the following is true:*

- *Payment has not been received.*
- *The customer's security clearance has not been verified.*

**Comment:** This revised version uses *RuleSpeak's* bullet list convention to eliminate the “either”. New conditions can now be added more easily, or existing ones removed.

**Rule:** *A withdrawal from an account may be made only if both the account is active and the account balance is greater than zero.*

**Comment:** “Both” suggests exactly two conditions and should be eliminated.

**Revised Version:** *A withdrawal from an account may be made only if all the following are true:*

- *The account is active.*
- *The account balance is greater than zero.*

### 6.2 Embedded numbers are often not good

**Rule:** *The client fee portion for an approved claim must be computed as 25% of the claim amount if the total contribution of the family for the year does not exceed \$500.*

**Comment:** This statement includes the numeric threshold “\$500”. This same threshold (with the same meaning) is likely to also appear in other Business Rules Statements. If the threshold changes (e.g., for the next year) it must be changed in all the statements. If all are not changed at the same time and in the same way, inconsistencies result.

**New Rule:** *The maximum contribution per family per year must be \$500.*

**Revised Version:** *The client fee portion for an approved claim must be computed as 25% of the claim amount if the total contribution of the family for the year does not exceed the maximum contribution per family per year.*

**Comment:** A new Business Rule has been created to give the name “maximum contribution per family per year” to the actual threshold amount \$500. Now the numeric threshold has been ‘localized’ (and possibly standardized) in a single statement. In the revised version of the original statement, this new name now appears rather than “\$500”. The revised statement is no longer impacted if this actual threshold changes (say to \$600). The same is also true for all other statements where “maximum contribution per family per year” appears.

**Caution:** Be careful about creating too many new terms – all business terminology must be acceptable and easily ‘consumed’ by the business community.

## 7.0 Re-Usability in RuleSpeak

### 7.1 Embedded calculations are not good

**Rule:** *The sum of all payment amounts applied to an order must be greater than or equal to the amount due for the order.*

**Comment:** This Business Rule involves calculating the total amount paid for an order. Then that result is compared to the total amount due for the order. Any embedded calculation, explicit or presumed, like this should be expressed in a separate statement.

**New Rule:** *The amount paid for an order must be computed as the sum of all payment amounts applied to the order.*

**Revised Version:** *The amount paid for an order must be greater than or equal to the amount due for the order.*

**Comment:** A new Business Rule Statement has been created to express the appropriate computation formula. In *RuleSpeak*, the result of any computation (e.g., “amount paid for an order”) is always indicated as the subject. The revised version of the original statement no longer embeds anything about the calculation formula itself (which was only partially complete). Instead the revised version simply references the result of the calculation by name. The net effect is there are now two Business Rules where before there was only one. The following benefits accrue:

- ↪ The revised version is simpler than the original and thus easier to analyze and understand.
- ↪ The two Business Rules can be changed independently, yielding greater overall agility.
- ↪ The calculation formula can be used by yet other Business Rules – they can simply reference the result by name.
- ↪ The computation formula has been localized to a single statement and in the process, possibly standardized.

**Caution:** Following this approach naturally increases the overall number of Business Rules. Be prepared to manage them effectively.

### 7.2 Embedded conditions are often not good

**Rule:** *A customer whose outstanding balance exceeds \$1,000 on each of their last three successive invoices must not place an order for an item whose cost exceeds \$500.*

**Comment:** This Business Rule involves the following two conditions:

- ↪ A customer whose outstanding balance exceeds \$1,000 on each of their last three successive invoices.
- ↪ An order for an item whose cost exceeds \$500.

**Ask:** How important are these conditions to the overall set of Business Rules?

- ↪ Do they appear in other Business Rule Statements?
- ↪ Is the logic given consistently?
- ↪ Does the business have names for them?

**New Rule:** *A customer must be considered high risk if the outstanding balance exceeds \$1,000 on each of their last three successive invoices.*

**New Rule:** *An item must be considered big ticket if its cost exceeds \$500.*

**Revised Version:** *A high risk customer must not place an order for a big ticket item.*

**Comment:** Each of the two conditions has now been given a name, “high risk” and “big ticket” respectively. Two new Business Rule Statements show the conditions as the respective derivation formulas for these new terms. The revised version of the original statement no longer embeds anything about the conditions themselves. Instead it simply references the results of the derivations by name. The net effect is that there are now three Business Rules where before there was only one. The following benefits accrue:

- ↪ The revised version is simpler than the original and thus easier to analyze and understand.
- ↪ The three Business Rules can be changed independently, yielding greater overall agility.
- ↪ The derivation formulas can be used by yet other Business Rules – these other Business Rules can simply reference the results by name.
- ↪ The derivation formulas have been localized to a single statement and in the process, possibly standardized.

**Caution:** Be sure to get agreement within the business community about the new names and their standardization.

### 7.3 Explicit mention of processes is usually not good

**Rule:** *A game must not finish if tied.*

**Comment:** The verb “finish” in this sentence seems to refer to the process or event ‘to *become* finished’. Tying Business Rules directly to processes inherently limits their re-usability. For that reason, Business Rules should reference *states* of

the business or things within it, rather than processes. In *RuleSpeak*, states of things are indicated by use of adjectives or past participles.

**Revised Version:** *A finished game must not be tied.*

**Comment:** This revised version references two states of a game, “finished” and “tied”. No matter what process or events might produce these states, the Business Rule disallows them simultaneously for a game.

## 8.0 Events in RuleSpeak

### 8.1 CRUD is not good

**Rule:** *Update product cost when the cost of any of the product's components changes.*

**Comment:** “CRUD” stands for create, retrieve, update, delete – all *system* events. The statement above, which includes “update”, is therefore not expressed purely in business terms. It also uses the imperative form.

**Ask:** What *business* term is an appropriate subject for the Business Rule?

**Revised Version:** *A product's cost must be computed as the sum of the cost of all the product's components.*

**Comment:** In *RuleSpeak*, the subject of any Business Rule Statement providing a calculation formula is always the name of what is being computed. In the revised version above, “product's cost” is therefore indicated as the subject.

**Caution:** Be alert to the hidden side effects in using CRUD forms to express Business Rules. Often the result is an unintended or unknowing limiting of the decision logic to a single event. For example, the original version of the Business Rule above limits its coverage to only the following event:

↳ When the cost of a component included in a product changes.

The form of the revised version is such that it covers not only that event, but the following two events as well:

↳ When a component is newly added to the composition of a product.

↳ When a component is newly removed from the composition of a product.

This broadening of coverage may or may not represent the true business intent, which should be analyzed carefully. (If not correct, the “when” condition should appear explicitly at the end of the sentence.) *No “when” condition should ever appear in a Business Rule Statement accidentally.*

**Rule:** Don't delete a customer that has placed any open orders.

**Comment:** The CRUD form in this statement is “delete”. CRUD is never good for Business Rules.

**Ask:** What is the true business intent? It stands to reason that if deleting a customer that has placed an open order is disallowed, then *opening* an order

*without* a customer is probably also disallowed. From a business perspective, always knowing who the customer is for any open order is probably key.

**Revised Version:** *An open order must be placed by a customer.*

**Comment:** This version omits any mention of the “delete a customer” event. It inherently also covers the “open an order” event (i.e., asserting that an order is open).

## 8.2 “When” is often not good

**Rule:** *When an order is created, it must have a promised shipment date.*

**Comment:** This statement is written such that it applies only *when* an order is created (a CRUD event). But what about two seconds later?! Should somebody (or some system) be allowed to delete the promised shipment date? Probably not.

**Revised Version:** *An order must have a promised shipment date.*

**Comment:** This version omits any mention of the “create an order” event. It inherently also covers the “delete a shipment date” event. Coverage of both events is probably the true business intent. The revised version expresses this intent very simply.

**Caution:** Experience has shown that the large majority of Business Rules are inherently and naturally *multi-event*. *RuleSpeak* assumes all relevant events are covered by a Business Rule Statement unless specific events are set off explicitly by a “when” clause.

**Rule:** *When an advisor is selected to advise a student, that advisor must be a teacher teaching some course that student takes.*

**Comment:** As written, this statement applies only at the point in time when an advisor is selected to advise a student, *not* thereafter.

**Ask:** What is the true business intent?

- ↳ Does some course-based connection between student and advisor need to continue to exist after the time of selection?
- ↳ What if the last remaining course-based connection is discontinued?

**Revised Version:** *The advisor who advises a student must be a teacher teaching some course that student takes.*

**Comment:** This when-free version assumes that some course-based connection between the student and advisor must continue to exist over time. The business intent should be analyzed carefully to determine

whether this assumption is correct. If not, the Business Rule should be expressed as follows, with the “when” clause at the end.

**Revised Version:** *The advisor who advises a student must be a teacher teaching some course that student takes when the advisor for the student is selected.*

**Caution:** Remember that “when” in *RuleSpeak* is always taken to mean “only at the point in time that some specified event occurs”.