Engagement Policy

Justification for Pre-emptive Attack

Policy for Attack

This exercise is intended to both establish policy and to document the justification for a pre-emptive attack. It is provided to indicate the judgmental / subjective reason that a person, a tribe, an organization, or a country might exercise in making this decision.

It is offered as a better way of exposing the justification than merely using the English written or verbal language, which is always open to interpretation.

The policy maker is provided with a series of reasons that may cause the individual or organization to choose Attack as the preferred option. These reasons are followed by other reasons that may cause the individual or organization NOT to attack.

These reasons are combined using Compsim's patented judgmental reasoning model. An analog result is obtained that will range between 0 and 100.

This result will explain the reasoning to attack (or not). It is intended to show how the drivers and blockers might be accumulated.

The policy maker can adjust the threshold at which point the attack decision is made.

▶ | Config | Continue

Interactive Policy Development and Interpretation

Click on the image above

An engagement policy that defines when an entity may choose a pre-emptive attack needs to integrate a number of variable factors to accumulate a "score". If that score is larger than a "threshold" then sufficient justification is accumulated to justify and explain an attack.

The "factors" are a number of "weighted reasons" that might be used to justify or block the attack. . Each of the factors (reasons) carries a subjective weight (or impact).

4. Respond to the safety of a friend

40
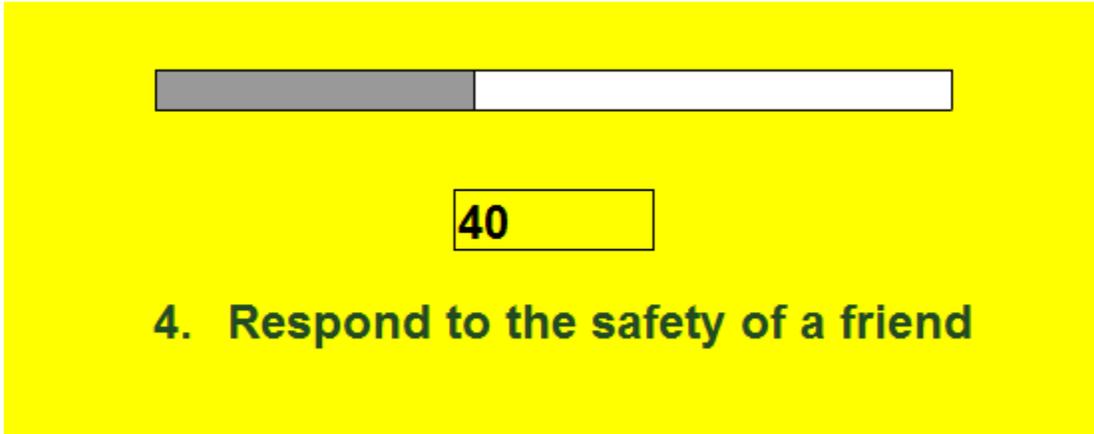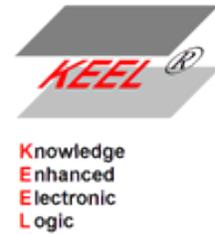
This image shows a reason that would support an attack (Respond to the safety of a friend). The user has assigned this reason to have a maximum impact of 40 (out of 100).

Different entities may adjust the reasons to match their specific situation. This application includes a configuration function where the user can assign weights to the different reasons. Each reason can be assigned a weight between 0 and 100%. Assigning a weight of 100 would mean that this one reason could carry sufficient reason to engage (a supporting reason) or to block the engagement (a blocking reason).

Once the impacts of the different reasons are configured, the user hits the "Continue" button to assign situational "values" to the different reasons.

4. Respond to the safety of a friend

60.5
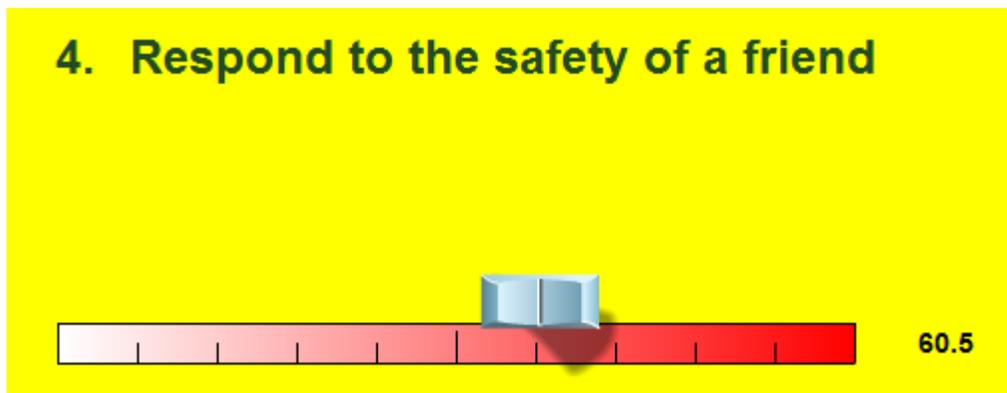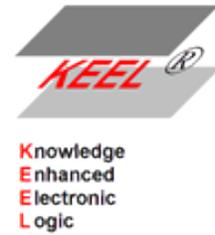
In this case the user has used intelligence data to assign a value of 60.5 to this reason.

This means that this reason (that has an impact weight of 40) is justified with intelligence of 60.5% or a value of 24.2. This is just one of the reasons.

In this example, we have 19 reasons that might support an attack, and 21 reasons that might object to an attack.

All of the reasons are accumulated using the KEEL algorithm. This algorithm is characterized by the concept that "impossible" overrides "must". This means that if there is any reason that carries a 100 blocking weight, then there will be no accumulated value (or zero) which would justify an attack.

The final decision for the attack is compares the accumulated justification value with a threshold.
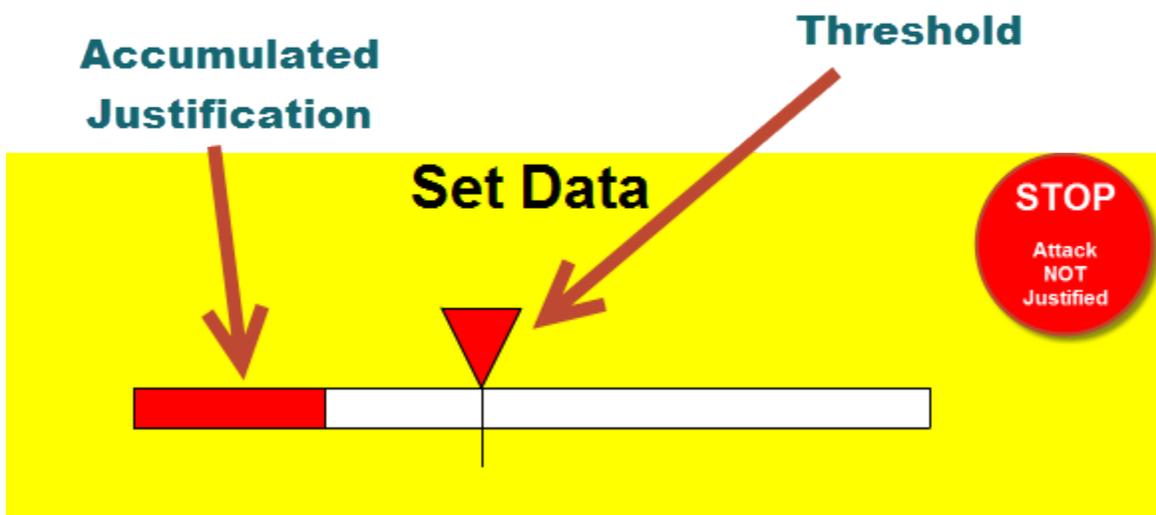
To adjust the Threshold one drags it to the right or to the left. The further to the right it is dragged, the more accumulated justification is required. If the Accumulated Justification is less than or equal to the Threshold, the indication is provided to "STOP – Attack NOT Justified". If the Accumulated Justification is greater than the Threshold, an indication that the "Attack is Justified is displayed.
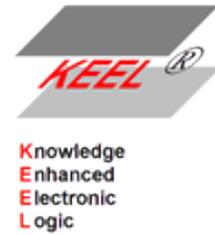
When all of the "weighted policy reasons" have been supported with "situational values" a scrolling window is displayed
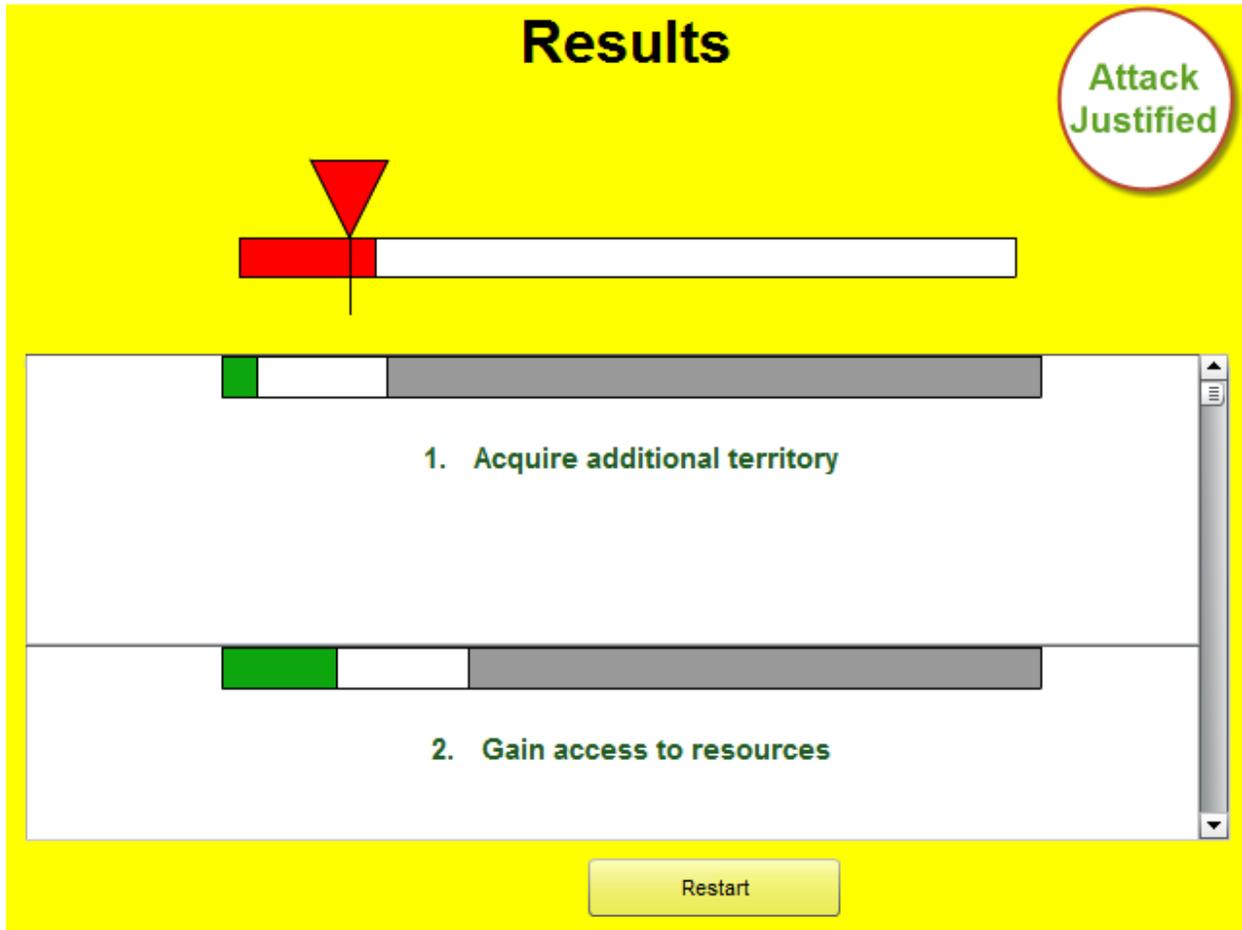

The screen shot above shows the scrolling window that "explains" the decision. In this case the Attack is Justified according to the policy and to the weighted situational analysis.

The gray bar indicates the potential for a reason to carry a 100% impact. The white bar is the weight that the particular reason has been assigned to the policy. The green bar indicates the situational value. In this case, for reason 1, the policy value to "Acquire additional territory" has a policy impact of 20. The situational value (the desire in this case to acquire additional territory) was assigned a weight of 23.

For reason 2, the Policy value is rated at 30 and the situational value is 45.

Accumulating of all the reasons drives the red bar at the top. This is compared to the Threshold value that, in turn, drives the policy decision that the "Attack is justified".
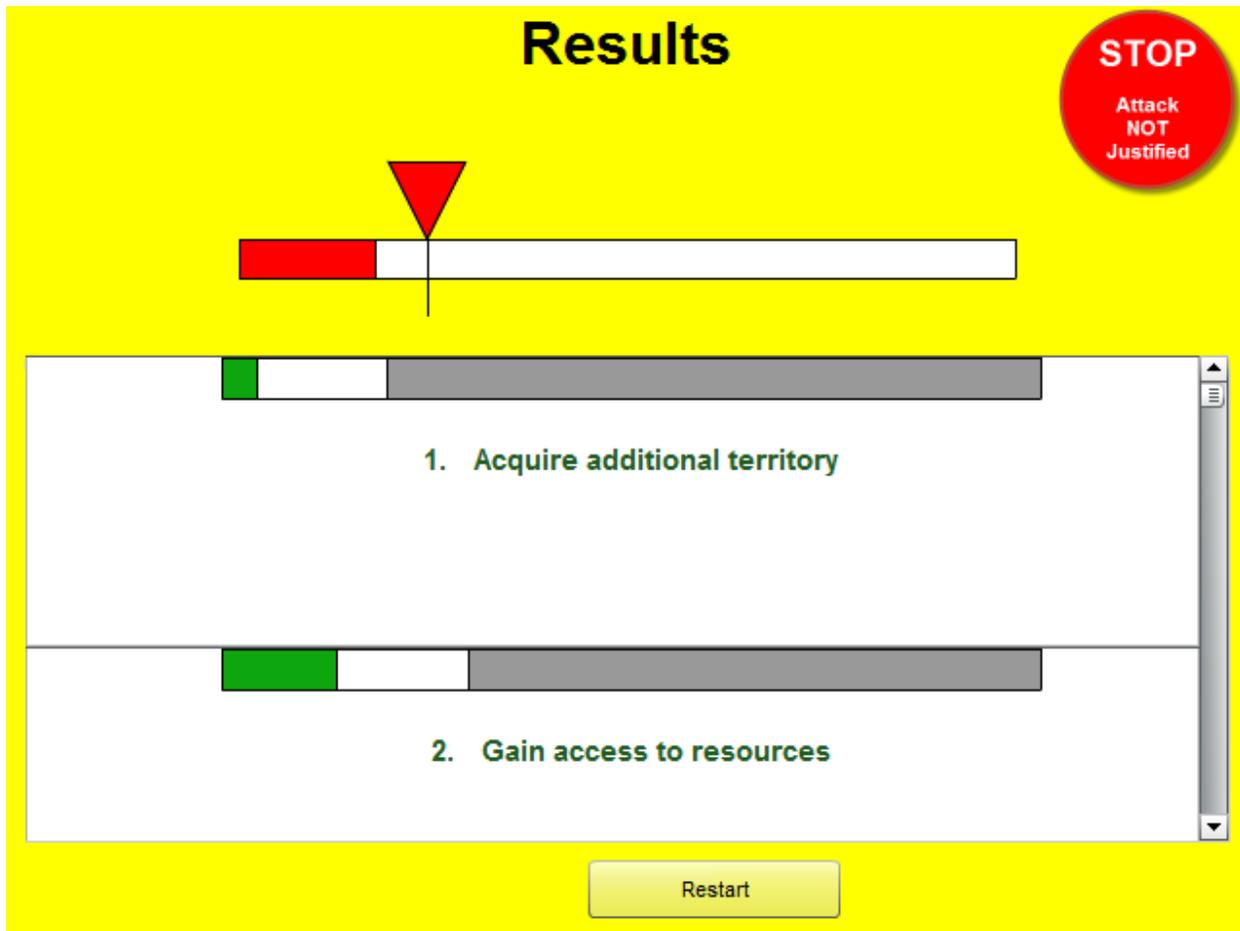
This image shows the same data with the Threshold set at a higher level.   The policy decision is "STOP Attack NOT Justified".

The user can scroll up and down through the list of reasons and see the policy value and the situational value that leads to the decision.

This model can be used to "test" the policy by configuring the impacts of the different reasons against different situational values.
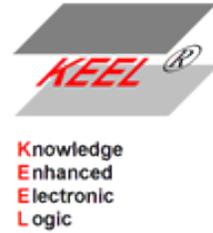
A more fully developed model would decompose the situational values into separate intelligence and behavioral characteristics. The result would lead to a fully autonomous system that could fully explain the policy and background situational analysis.

Summary:

This may not be the best user interface to show the policy or to expose the data that justified one decision or not. That is not the intent, nor is it the intent to define the "best" engagement policy. In some cases, numbers (or values assigned by the user by using scrollbars) have been hidden from the user. This has been done, because sometimes seeing specific numbers when making subjective decisions confuses the issue. But in a production system, this could easily be changed to match the specific desires of the user. Behind the scenes, the KEEL cognitive engines are processing numeric information just as if it was a mathematical formula.

This demo and paper is intended to demonstrate how easy it is to create a configurable policy using the Compsim tools and the KEEL "dynamic graphical language".

This paper is supported with a movie showing the development of the KEEL-based policy:

KEEL Concept and the KEEL Toolkit

Contact Compsim for any questions you might have or to obtain additional information on creating 100% explainable and auditable policies.

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