# WSPro Continuous Abilities & continuous effects

Sequence of Continuous Ability Application:

1. **Card with continuous abilities is instantiated at game start, effects are active always and are executed in checktimings instead of by event handlers (see below)**

Sequence of Continuous Effect Application:

Resolving effect modifications to cards

1. Get[stat] is called upon a particular card
   1. Obtain the base, original value for the card from the basecard that this card is derived from
   2. Run through a list of effects **in order\*(** to obtain the final value
      1. Each EffectModification object checks it’s own conditional to make sure its still valid
         1. If it is, it applies the effect and moves on. ~~If Not, removes itself from the list~~
         2. The conditional should be the same as the one that added the effect (in effect.update())
   3. Return the final value

**\*In order refers to the order for applying continuous modifications in the comprehensive rules (i.e. if a continuous effect sets power to 0 & there’s a continuous effect that adds +500 to the power, the one that sets over modifies is the last to execute.**

Adding continuous effects to cards via a Continuous Ability

1. Every checktiming, check if continuous conditional is met
   1. Effect.update()
      1. The Continuous Ability adds it’s effect (i.e. stat modification) to all of its targets.
         1. The effect goes into the end of a list for that particular start modification on that particular target card.
      2. (if the conditional isn’t external) remove itself if it determines it needs to (e.g. it was only until end of turn) **this should only be a step if the ability was created from another ability (not at game start)**

EffectModification < for a particular stat type >

Methods:

isStillvalid – returns a Boolean whether to call the apply method

apply – given the stat value, apply a modification to it.

Implementation Examples:

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| Example Card/effect | Implementation Details |
| **KC/S25-E006**  **【AUTO】 During the attack phase, when your character or your opponent's character is returned to hand from the waiting room, all of that player's characters get -3 soul until end of turn.** | 1. Continuous ability is created with the conditional to check **if the turn number is the one when it was initially created**.\*\* 2. Continuous effect is created with the type Integer(for level) and the conditional to check i**f the turn number is the one when it was initially created.**   **\*\*** *This is needed because it’s possible for a card to be placed on the stage and attack after this effect has resolved, thus requires adding a continuous ability* |
| **SAO/S51-E023**  **[CONT] All of your other characters get the following ability. "[CONT] This card cannot side attack."** | 1. Continuous ability is created at start of game with the conditional to check **if this card is on the stage.** It will the following effect to all other cards on the stage: 2. Continuous effect is created with the type <Collection<AttackMethod >> and the conditional to check if original card (**SAO/S51-E023**) is on the stage |
| **TL/W37-E001**  **CONT If all of your characters are Trans or Housework, this card gets +1500 power and the following ability. "CONT This card cannot be chosen by your opponent's effects."** | 1. Continuous ability created at the start of the game with the conditional to check **if this card is on the stage & if all cards have the specified traits**. 2. Continuous effect is created with the type Boolean (for isOpponentEffectTargetable) and the conditional to check **if the same condition is met for ability mentioned above\***   \*\* *There is also the argument that this effect is indefinite and the continuous effect should always return true.* |
| **RW-W48-073**  **AUTO [Put a marker underneath this card into your waiting room] At the beginning of your opponent's attack phase, you may pay the cost. If you do, this card gets +2000 power and the following ability until end of turn, "CONT The character facing this card gets -2 soul."** | 1. Continuous ability is created with the conditional to check if **this card is on center stage** 2. Continuous effect is created **and placed on the ability owner** with the type Integer (Power) with the conditional **if the turn number is the one it was initially created**. 3. Continuous effect is created **and placed on the card facing the ability owner** with the type Integer (Soul) with the conditional **if [creationCardGUID] is facing this card** |
| **SAO/S47-E112 RR**  **[CONT] When this card is played from your hand, you may choose one of your cards named "After the Battle, Kirito", and put it into your waiting room. If you do, you may play this card with 0 cost.** | 1. **\*\*\*this particular ability is an exception. (and a pain in my a\*\*) Make the initial effect an AUTO instead of a CONT.\*\*\*** 2. Create an Auto that checks for ON\_PLAY\_DECLARATION … if the user accepts both conditions: 3. Continuous effect is created with the type Integer (cost) with the condition **if the turn number is the one it was initially created.**   ALTERNATE IMPLEMENTATIOn   1. ~~Continous ability is created with the conditional~~ **~~if this card is in hand & after the battle is on the field & player responds to a prompt to ask if you are going to play it with 0 cost this turn~~** |