A brief comparison guide between

the ELO and the Glicko rating systems

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The ELO rating system	The Glicko rating system
Rating points	
Rating points in both systems is a unique characteristic of each player's playing strength. Each finished game in a FIDE rated tournament provides a positive or negative or zero rating change. Rating remains unchanged for as long as a player remains inactive.	
Reliability of a player's rating	
The ELO rating is considered reliable regardless of a player's inactivity, game results or strength of opponents.	The Glicko system introduces a new value associated with each player called **'rating deviation'** which measures the reliability of a player's rating. It provides an indication of a player's expected performance with 95% confidence within the interval [R-2xRD, R+2xRD]. Rating deviation increases due to inactivity and decreases after game results are submitted. It is responsible for the gravity of a result when the opponent's rating change is calculated. It also determines the development coefficient of a player's rating.
Publication of the rating list	
ELO rating and the development coefficient factor K associated with each player, need to be published in every list. Other values associated with each player such as title and number of games are not required for next period's calculations.	Both the Glicko rating and the rating deviation need to be published in every rating list. Both values are required for next period's calculations.
Frequency of publication	
Today the ELO rating list is published on a bi-monthly basis. A monthly list is also possible.	Optimum frequency of the Glicko rating list for FIDE rated tournaments has not been determined yet. Online correspondence chess sites that use the Glicko system prefer a monthly list.
Players included in the official list	
Only players with rating over the floor (today 1200 points) and players flagged as 'active' are included in the FIDE rating list. Inactive players, low rated players as well as players from Federations in arrears have hidden ratings. They do not lose their rating.	Regulations determining which players must have published rating need to be determined. However, these regulations should only affect world rankings. Players do not lose their rating and rating deviation.

The ELO rating system	The Glicko rating system
The formula	
ELO formula is rather simple. Ratings of both opponents, the development coefficient factor K associated to each player, the score probability table and the score of a game are required for the calculation of the rating change. The formula is easy to remember and calculations can be done manually.	Glicko Ratings and rating deviations of both players and the score of a game are required for the calculation of the new rating and rating deviation. Additional parameters are constants, the same for all the players. The formula is rather complex and calculations require a computer program.
Distributive property	
It allows game after game calculation of the rating change.	Although game after game calculation is possible, the distributive property does not apply to the Glicko system. All games of the current period are required for the calculations after a new result arrives.
The score probability table	
It associates the rating difference between two opponents to the expected score probability as a decimal between 0 and 1.	The score probability is dynamically calculated by the formula. It depends on both players' ratings the opponent's rating deviation.
The development coefficient factor K	
It is a constant defined by the player's statistics: total number of games and historical highest rating.	There is not a direct equivalent of ELO's K factor. However we can say that each game has a different gravity according to the opponent's rating deviation. The player's activity also determines the rate of rating change. Using ELO terminology we can say that an active player has a lower K compared to a less active player.
The global constant 'c'	
	A constant that must be defined prior to the Glicko system application. It is an indication of the period required so that the rating deviation of an inactive player has the same value as the unrated player's one. It affects Glicko's equivalent K factor.
The 400 point rule	
Introduced to encourage strong players to play in open tournaments. ELO system is flexible to politically motivated changes.	Original Glicko formulas are the same for all players and do not provide privileges to certain players. The flexibility of the Glicko system to a politically driven demand is not yet determined.
Unrated players	
All newly registered players are required to play 9 games before they receive an official FIDE rating for the first time. The formulas are not the same with the ones used for rated players, and rather complex in practice.	Newly registered players receive an initial rating and the highest possible value of rating deviation. Rating change as well as rating deviation change are calculated with the same formulas used for previously rated players. Practically there are no unrated players.
Rating performance	
Can be easily calculated with the same data (opponents' rating, score and score probability table) as the rating change.	A more complicated formula must be used. No manual calculation is possible. A computer program must be used instead.

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Late submitted tournaments	
Period ratings (taken from the list valid at the start of tournament) are used regardless of how old the games are. This method possibly provides the minimum error in calculations.	The nature of the system does not allow tournaments submitted late. Methods for resolving late submitted tournaments must be available. The error introduced into the calculations must also be determined.
Inflation / deflation	
The reasons for the inflation of the FIDE rating list observed today have not been fully explained yet.	No satisfactory information available yet.

Glicko as the successor of the ELO rating system

Important QC tasks

- Decide a method for testing and comparing rating systems.
- Compile a catalog of all the problems associated with the ELO rating system.
- Produce retrospective Glicko ratings calculations. These lists may provide valuable information about the working of the new rating system.
- Reexamine a sufficient number of norm certificates of pending and old titles. Title requirements should not vary significantly with a new rating system.
- Determine the problems caused to the system because of late submitted tournaments.

Other Glicko specific decisions

- The choice of the global constant 'c'.
- The precision of the rating deviation value (integer or floating point) and the method for calculating the rating deviation of the inactive player.
- The frequency of publication of the Glicko rating list.
  (I consider that a monthly list is the optimum choice.)
- Initial ratings and rating deviation used for the calculation of the first Glicko rating list.
  (I propose that the ratings from the last ELO list should be used, but rating deviation should come from the retrospective rating calculations.)
- The conditions met by a new player (the unrated player of the ELO system) so that his name is included in the lists (provisional rating).
- The conditions met by an inactive (or an incidental) player so that his name is omitted from the lists.
- The formula (or method) for performance rating calculation.