

Claims:

1. A server computer system for use with a plurality of client computers each assigned to a respective class, comprising:
 - a memory accessible to the server computer system and storing a server candidate pool having a plurality of individuals, each individual identifying a plurality of indicators and at least one corresponding action in dependence upon the indicators, each of the classes being associated with a respective subset of indicators in a plurality of indicators, not all of the subsets being the same;
 - a communications part through which the server computer system receives individuals from the client computers, including a first subset of the individuals all received from a first one of the classes; and
 - a processor configured to:
 - determine whether the first class satisfies a predetermined convergence condition, and if so then to merge the first class with a second one of the classes to derive a merged class, at least some of the client computers that were assigned to the first class being re-assigned to the merged class, and
 - transmit to the client computers for further evaluation, each individual in the first subset of the received individuals;wherein each individual in the first subset transmitted for further evaluation is transmitted for further evaluation to:
 - a client computer in the first class, if the first class did not satisfy the predetermined convergence condition, and
 - a client computer in the merged class, if the first class did satisfy the predetermined convergence condition.
2. The server computer system of claim 1, wherein the processor is further configured to:
 - determine whether each of the received individuals is already stored in the server candidate pool; and

discard all of the received individuals having an updated fitness value which is below a predetermined server minimum fitness, wherein the updated fitness value for each received individual is,

for individuals which are not already present in the server candidate pool, a fitness value received by the server computer system in conjunction with the received individual; and

for individuals which are already present in the server candidate pool, a combination of a fitness value received by the server computer system in conjunction with the received individual and a fitness value previously associated with the individual in the server candidate pool.

3. The server computer system of claim 2, wherein the predetermined server minimum fitness is dependent upon a fitness of the least fit individual in the server candidate pool.

4. The server computer system of claim 2, wherein the processor is further configured to store in the server candidate pool at least some of the accepted individuals.

5. The server computer system of claim 1, wherein the individuals received by the server computer system through the communications port further include a second subset of individuals all received from the second class,

wherein the second class is also determined by the server computer system to satisfy a predetermined convergence condition,

wherein the merging of the first class with the second class further includes re-assigning to the merged class at least some of the client computers that were assigned to the second class,

wherein the processor is further configured to transmit to the merged class of client computers for further evaluation, each individual in the second subset of the received individuals.

6. The server computer of claim 1, wherein the merged class is associated with a union of the subset of indicators previously associated with the first class and the subset of indicators previously associated with the second class.

7. The server computer system of claim 1, wherein one of the individuals transmitted for further evaluation is transmitted for further evaluation also to:
an additional client computer in the first class, if the first class did not satisfy the predetermined convergence condition, and
an additional client computer in the merged class, if the first class did satisfy the predetermined convergence condition.

Claims:

1. A server computer system for use with a plurality of client computers each assigned to a respective class, comprising:

a memory accessible to the server computer system and storing a server candidate pool having a plurality of individuals, each individual identifying a plurality of indicators and at least one corresponding action in dependence upon the indicators, each of the classes being associated with a respective subset of indicators in a plurality of indicators, not all of the subsets being the same;

a communications port through which the server computer system receives individuals from the client computers, including a first subset of the individuals all received from a first one of the classes; and

a processor configured to:

determine whether the first class satisfies a predetermined convergence condition, and if so then to merge the first class with a second one of the classes to derive a merged class, at least some of the client computers that were assigned to the first class being re-assigned to the merged class, and

transmit to the client computers for further evaluation, each individual in the first subset of the received individuals;

wherein each individual in the first subset transmitted for further evaluation is transmitted for further evaluation to:

a client computer in the first class, if the first class did not satisfy the predetermined convergence condition, and

a client computer in the merged class, if the first class did satisfy the predetermined convergence condition.

2. The server computer system of claim 1, wherein the processor is further configured to:

determine whether each of the received individuals is already stored in the server candidate pool; and

discard all of the received individuals having an updated fitness value which is below a predetermined server minimum fitness, wherein the updated fitness value for each received individual is,

for individuals which are not already present in the server candidate pool, a fitness value received by the server computer system in conjunction with the received individual; and

for individuals which are already present in the server candidate pool, a combination of a fitness value received by the server computer system in conjunction with the received individual and a fitness value previously associated with the individual in the server candidate pool.

3. The server computer system of claim 2, wherein the predetermined server minimum fitness is dependent upon a fitness of the least fit individual in the server candidate pool.
4. The server computer system of claim 2, wherein the processor is further configured to store in the server candidate pool at least some of the accepted individuals.
5. The server computer system of claim 1, wherein the individuals received by the server computer system through the communications port further include a second subset of individuals all received from the second class,
 - wherein the second class is also determined by the server computer system to satisfy a predetermined convergence condition,
 - wherein the merging of the first class with the second class further includes reassigning to the merged class at least some of the client computers that were assigned to the second class,
 - wherein the processor is further configured to transmit to the merged class of client computers for further evaluation, each individual in the second subset of the received individuals.
6. The server computer of claim 1, wherein the merged class is associated with a union of the subset of indicators previously associated with the first class and the subset of indicators previously associated with the second class.
7. The server computer system of claim 1, wherein one of the individuals transmitted for further evaluation is transmitted for further evaluation also to:
 - an additional client computer in the first class, if the first class did not satisfy the predetermined convergence condition, and
 - an additional client computer in the merged class, if the first class did satisfy the predetermined convergence condition.