



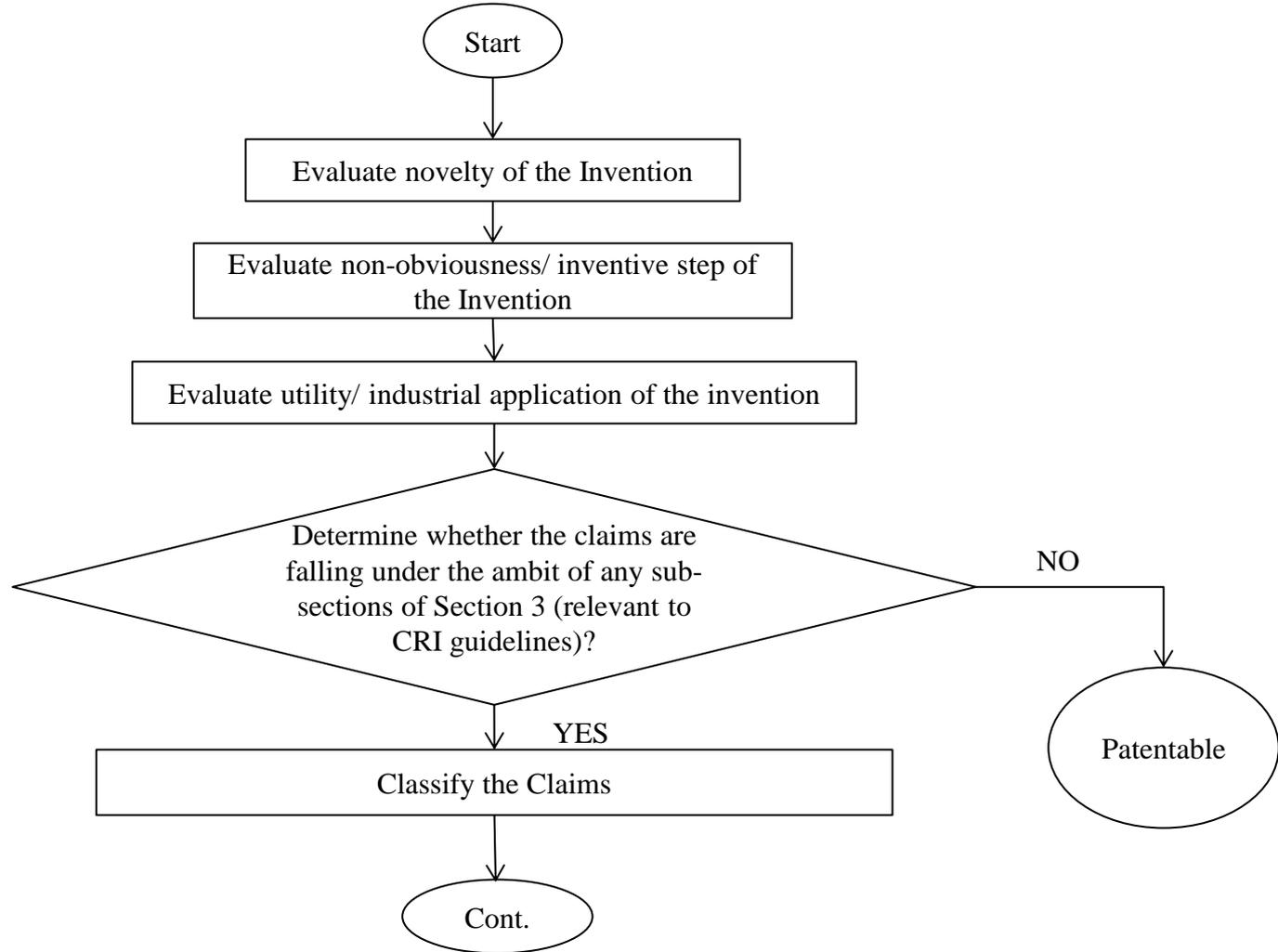
Software Patent Guidelines - Analysis of Examples

Nov-15

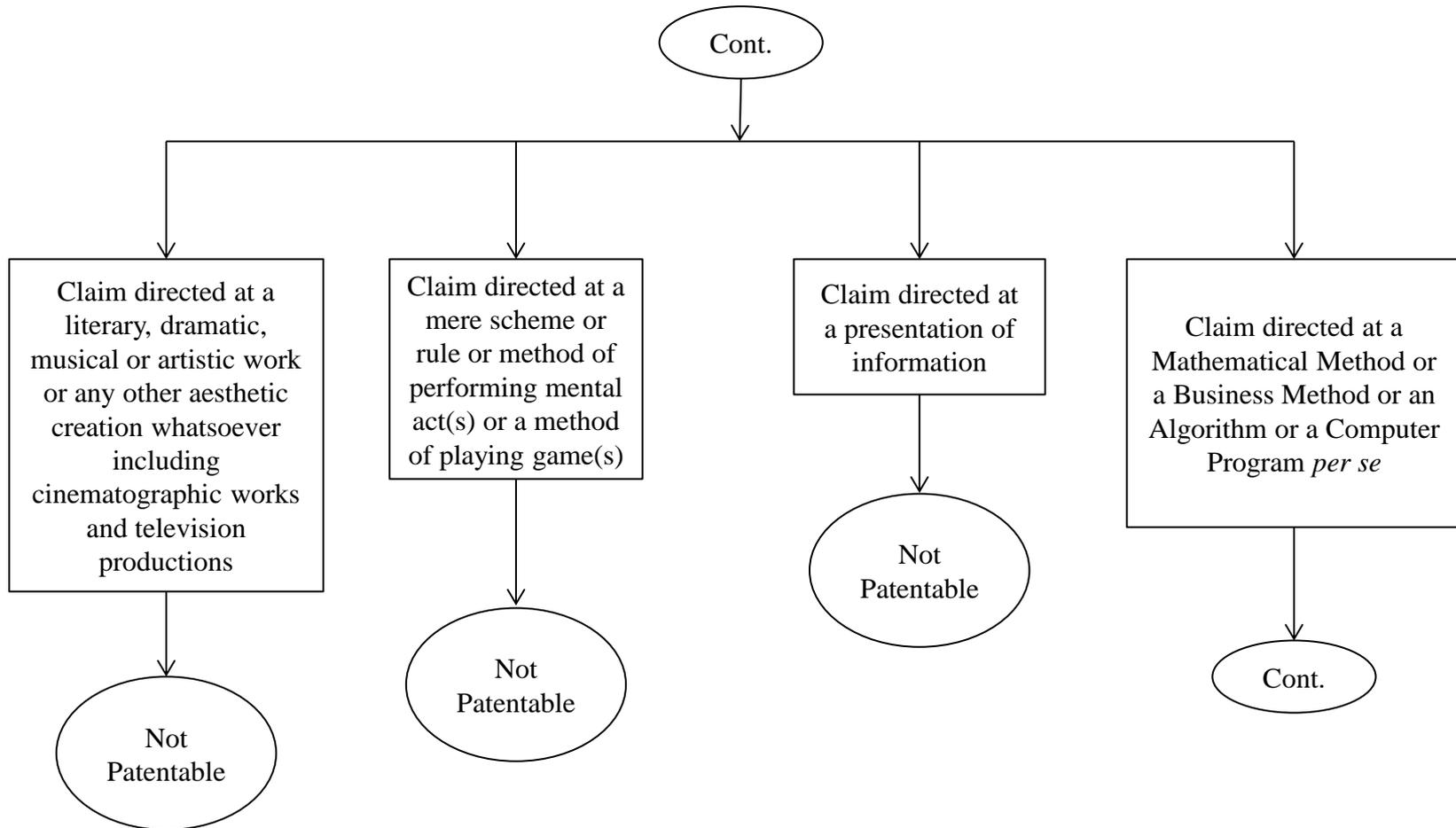
New CRI Guidelines dated 21.08.15

- On 21 Aug 15, the Indian patent office has instituted new guidelines for evaluation of computer related inventions.
- The guidelines are available at:
http://www.ipindia.nic.in/iponew/CRI_Guidelines_21August2015.pdf
- The official patent office order no. CG/ Office Order/ 2015/112 mandates all the patent examiners to use these guidelines to evaluate the patentability of software patent applications.
- As per the new guidelines, computer programs under certain circumstances are patentable and the patent office can provide claims relating to computer programs if the applicant is able to show certain “technical advancements”.
- This presentation reviews the various examples of eligible/ ineligible claims as per Section 8 of the CRI guidelines.

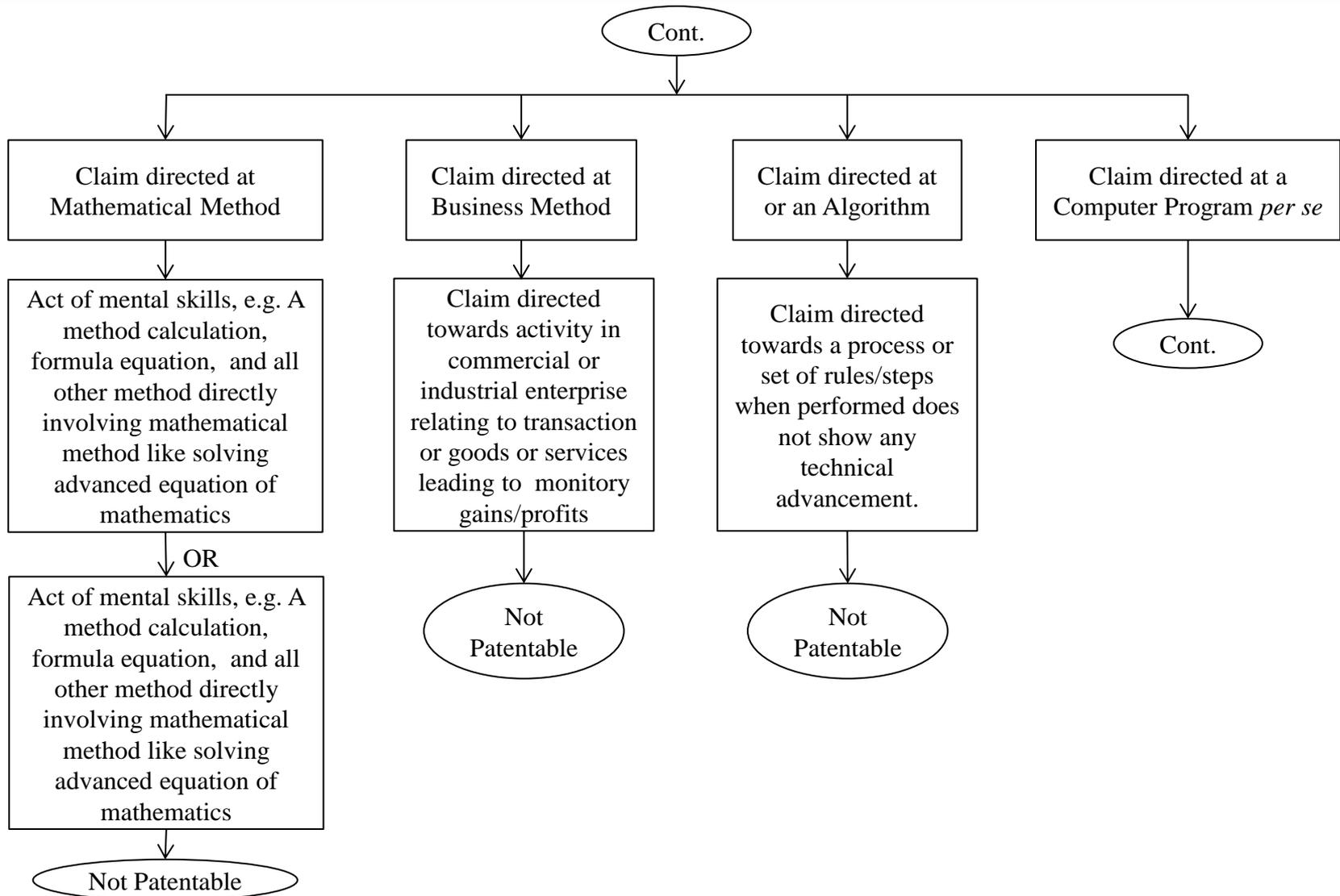
Examination procedure relating to CRI guideline – Flow Chart



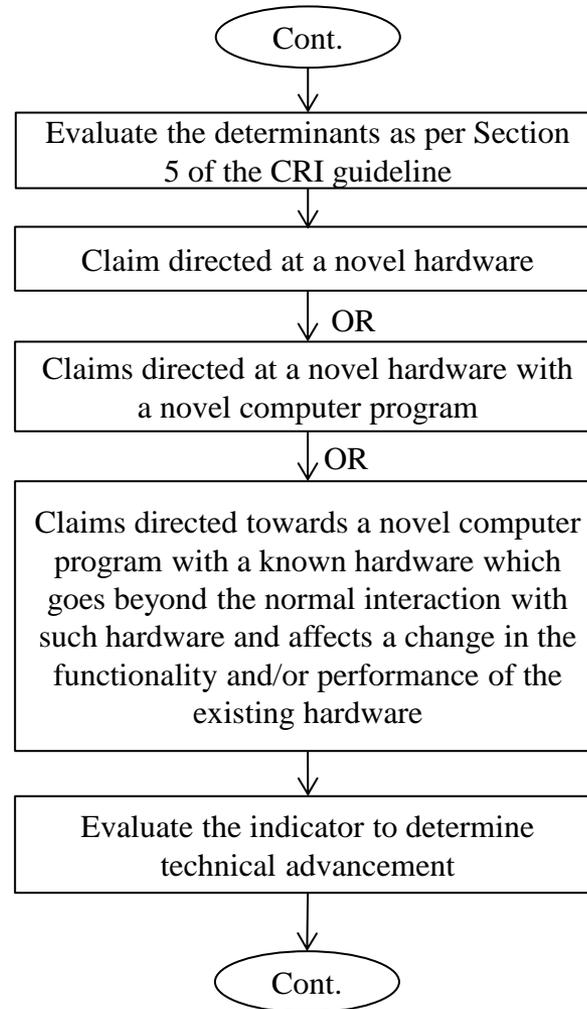
Examination procedure relating to CRI guideline – Flow Chart



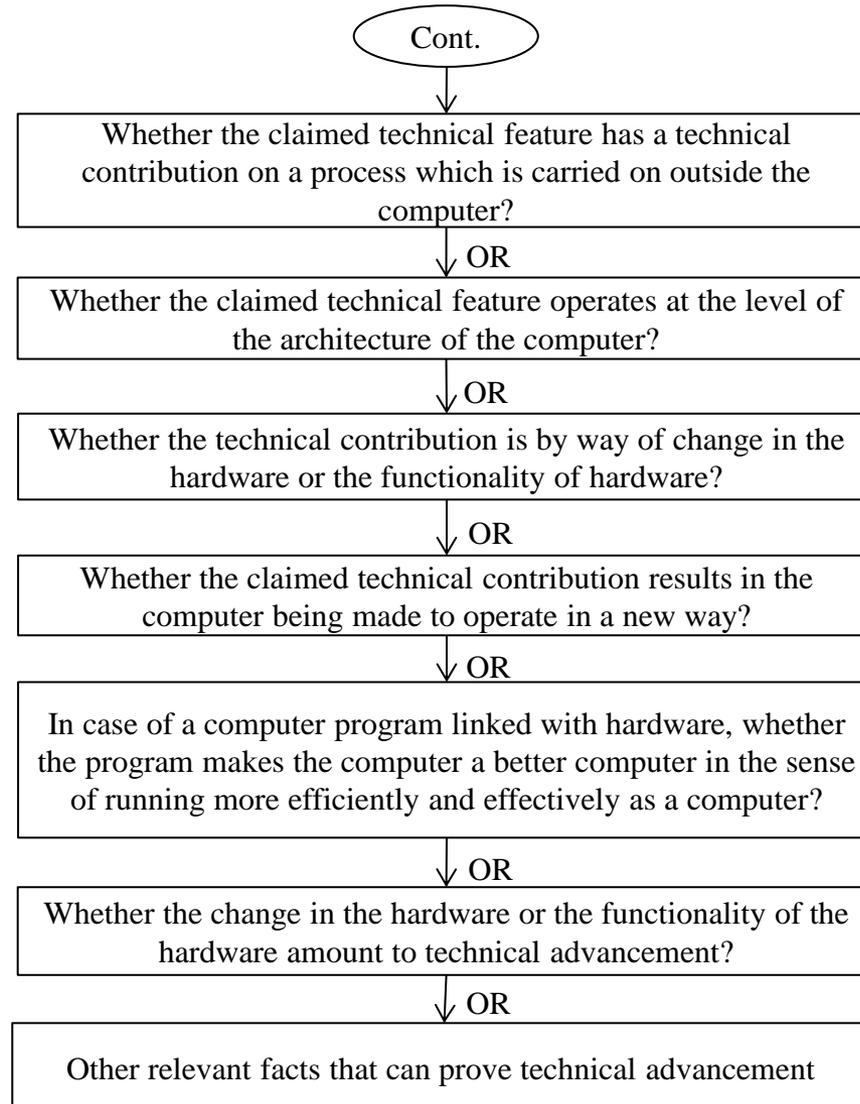
Examination procedure relating to CRI guideline – Flow Chart



Determinants as in Section 5 of CRI guidelines



Technical Advancement as per Section 6 of CRI guidelines



Example 1 of Eligible Claims

1. An apparatus (610, 650) for eigenvalue decomposition and singular value decomposition of matrices in wireless communications comprising:
 - plurality of transmitters (622a; 622ap);
 - plurality of receivers (622a; 622ap);
 - a controller (630) configured to receive traffic data and generating data symbols;
 - a transmit (TX) data processor (614) coupled to said controller (630);
 - a receive (RX) data processor (642) coupled to said controller (630);
 - a channel processor (628) coupled to said controller (630);
 - wherein said channel processor (628) and said controller (630) performs a plurality of iterations of Jacobi rotation on a first matrix of complex values with a plurality of Jacobi rotation matrices of complex values, wherein, for each of the plurality of iterations, said channel processor (628) and said controller (630) is configured to form a submatrix based on the first matrix, to decompose the submatrix to obtain eigenvectors for the submatrix, to form a Jacobi rotation matrix with the eigenvectors, and to update the first matrix with the Jacobi rotation matrix, and to derive a second matrix of complex values based on the plurality of Jacobi rotation matrices, the second matrix comprising orthogonal vectors; and
 - a memory (632) coupled to the said channel processor (628, 630) and said controller (678, 680).

Example 1 Analysis

1. The claimed invention relates to an apparatus for eigenvalue decomposition and singular value decomposition of matrices in wireless communications.
2. The example claim is directed towards **an apparatus or machine or hardware** capable of processing a set of instructions.
3. The claims include **various electronic parts like transmitters, receivers, controllers, processors and memory** working together for performing a plurality of iterations of Jacobi rotation on a first matrix of complex values and using the output in the wireless communication.
4. Even though the invention relates to performing iteration of a Jacobi matrix, the claimed invention is patent eligible because it is directed to a hardware processing the iteration, wherein the steps of performing plurality of iterations of the Jacobi rotation appears to be taking the hardware *beyond the normal interaction or normal functionality of the already known hardware*.
5. Further, the iterative Jacobi rotation seems to be executable only using a processor and not manually, and the result of the iteration is utilized by the hardware while in wireless communication.

Example 2 of Eligible Claims

1. A method for granting an access to a computer-based object, wherein
 - a memory card having a program code processor is provided, with at least one public and one private key assigned to the memory card being stored thereon,
 - an item of license information which comprises at least one license code encrypted by means of the public key assigned to the memory card is provided at a computing device controlling the access to the computer-based object,
 - a symmetric key which is made available to the memory card and the computing device is generated from a first random number generated by the memory card and from a second random number provided by the computing device,
 - the encrypted license code and a specification, provided with a hash value encrypted using the symmetric key, of a function that is to be executed by the memory card for decrypting the license code are transmitted to the memory card,
 - the encrypted hash value is decrypted by the memory card and checked for agreement with a hash value computed for the specification of the function to be executed by the memory card,
 - if the result of the check is positive, the function for decrypting the license code is executed by the memory card and a decrypted license code is transmitted to the computing device,
 - the decrypted license code is provided at least temporarily for accessing the computer-based object.

Example 2 Analysis

1. The claim invention relates a software technology for granting an access of a computer-based object.
2. The claims include a memory card (hardware or electronic device) having a program code processor which is communicating with the computer device by the means of encryption and decryption. Further, the memory card and computer device exchange the encryption and decryption information for providing an access to a computer-based object stored in the memory card.
3. This method seems to be patent eligible based on the CRI guideline as the method seems to be transforming the hardware beyond the “normal” physical interaction between the software and the hardware on which it runs. Moreover, it comprises some process steps carried out by certain hardware elements like a memory card and a computing device to carry out the technical process or achieve the technical effects.

Example 3 of Eligible Claims

1. A method of controlling **an electronic device** (1) comprising **a touch sensitive display** (11) the method comprising:

displaying a plurality of graphical items (43) on **the touch sensitive display** (11) where each graphical item (43) has an identity (44);

detecting a coupling, formed by a user, of at least two graphical items (43), the coupling comprising, a trace on **the touch sensitive display** (11) between the at least two graphical items (43); and,

performing an action dependent upon the identity (44) of the coupled graphical items (43),

characterized in that when the user begins to make the trace, an indication is displayed to indicate the item (43) on which the trace began.

Example 3 Analysis

1. The claim invention relates a software technology for controlling an electronic device .
2. The claimed invention includes a hardware software combination.
3. The claim invention is directed towards a touch sensitive screen (hardware or electronic device) and electronic device capable of displaying a plurality of graphical items (software application) through the touch sensitive screen. Further, the method is capable of detecting a coupling, formed by a user, of at least two graphical items, the coupling comprising, a trace on the touch sensitive display between the at least two graphical items. Moreover, the method is capable of performing an action depending upon the identity of the coupled graphical items. Also, the method is capable of tracing the graphical item which the user desires to open.
4. The method, when running on or loaded into a computer, goes beyond the “normal” physical interaction between the software and the hardware on which it runs, and changes the functionality of hardware. Further, the method makes the computer a better computer in the sense of running more efficiently and effectively as a computer.

Example 4 of Eligible Claims

1. A method for providing a network bridge in UDP multicast traffic, the method being executed by a multicast repeater (108a; 708a) on a host computer system (104a, 704a) on a network (102a; 702a), the method comprising the steps of:

holding information about one or more other multicast repeaters (108a; 708a) which have been discovered, each multicast repeater (108a; 708a) being arranged on a separate network (102b; 702b) that is separated from the network (102a; 702a) including a host by at least one network device that is not configured to route UDP multicast addressing; and

at each time when a UDP multicast request packet (320; 720) is received via multicast, extracting a globally unique packet ID from the UDP multicast request packet (320; 720);

determining whether or not the multicast repeater (108a; 708a) has previously forwarded the UDP multicast request packet (320; 720) by searching an ID cache for the packet ID;

ignoring the UDP multicast request packet (320; 720) in a case where the multicast repeater (108a; 708a) has previously forwarded the UDP multicast request packet (320; 720); and

in a case where the multicast repeater (108a; 708a) has not previously forwarded the UDP multicast request packet (320; 720), transmitting the UDP multicast request packet (320; 720) to the one or more other multicast repeaters (108a; 708a) which have been discovered, and recording the packet ID in the ID cache, wherein the method comprises determining whether or not a UDP multicast request packet corresponding to a UDP multicast response packet (320; 720) has originated in the network (102a; 702a) whenever the UDP multicast response packet is received.

Source: [Page 16 of 21 of CRI Guidelines August 2015](#)

Example 4 Analysis

1. The claim invention relates a software technology for providing a network bridge in UDP multicast traffic.
2. The method being executed by **a multicast repeater on a host computer system on a network** for providing a network bridge in UDP multicast traffic. **The method allows the UDP multicast repeater** to perform various process for storing, receiving, and transmitting the UDP multicast request packet and extraction a globally unique packet ID from the UDP multicast request packet. Further, the method allows the multicast repeater to ignore previously forwarded the UDP multicast request packet by searching an ID cache for the packet ID and transmitting the UDP multicast request packet to the one or more other multicast repeaters which have been discovered whenever the UDP multicast response packet is received.
3. The method seems to be allowable as per CRI guidelines because it makes the computer a better computer in a way that the multicast repeater ignores the UDP multicast packets which were previously forwarded, thereby making the computer run more efficiently and effectively as a computer.

Example 5 of Eligible Claims

1. A method for tracking a mobile electronic device using instant messaging (IM), the method comprising the steps of:
 - determining whether a currently inserted subscriber identity module (SIM) card is different from the SIM card stored in a memory of a mobile electronic device;
 - stealthily initiating a live voice call over an instant messaging (IM) message to a predefined IM identity of a user; and
 - automatically sending IM message along with the live voice call, location and IMSI number of the currently inserted SIM card to the predefined IM identity of the user via an IM server if the currently inserted SIM card is different from the SIM card stored in the memory of the mobile electronic device.

Example 5 Analysis

1. The claim invention relates a software technology for tracking a mobile electronic device using instant messaging (IM).
2. The claim is directed towards a process.
3. The method being executed by **a hardware which includes** a mobile electronic device, a SIM card and a server. **The method is capable of** performing various process steps for tracking a mobile electronic device using instant messaging (IM). Further, the method automatically sends IM message along with the live voice call, location and IMSI number of the currently **inserted SIM card** to the predefined IM identity (other contact number or information) of the user via **an IM server** if the currently **inserted SIM card** is different from the SIM card stored in the memory of **the mobile electronic device**.
4. The method as claimed in the invention, provides technical contribution by improving the SIM identification functionality of the mobile phone (hardware). Further, the claimed computer program works with a known hardware but takes it beyond the normal interaction with the hardware.

Example 6 of Eligible Claims

1. A method of creating Tunnel End Points for a IPv6 over IPv4 tunnel using simple network management protocol (SNMP) in a system having **Dual-Stack Border Router as v4/v6 nodes**, the method comprising steps of:

selecting **at least one v4/v6 node as SNMP manager** and the rest as SNMP agent configuring the tunnel configuration pertaining to the new node (cloud) at the SNMP manager whenever **a new v4/v6 node** is added to the v4 network;

sending an SNMP SET request to **the new v4/v6 node** with the tunnel configuration information of all the nodes by **the SNMP manager**;

processing the SNMP SET request by **the said new v4/v6 node** and configuring the tunnel configuration information of all the nodes if the attempt succeeds;

sending a response to **the SNMP manager** indicating success or failure of the configuration;

configuring existing SNMP agents and the new node in order to effect incorporation of tunnel configuration information of **new v4/v6 node**.

Example 6 Analysis

1. The claim invention relates a software technology for creating Tunnel End Points for a IPv6 over IPv4 tunnel.
2. The claim is directed towards a process.
3. The method being executed by **a hardware which includes a system having Dual-Stack Border Router as v4/v6 node. The method is capable of performing various process steps for creating Tunnel End Points for a IPv6 over IPv4 tunnel using simple network management protocol (SNMP) in a system having Dual-Stack Border Router as v4/v6 node.**
4. The claimed invention is patent eligible because the claimed invention includes a hardware combined to a software and wherein the method has a technical contribution by changing the functionality of the hardware.

Example 1 of Ineligible claims

1. A method of scoring compatibility between members of a social network, said method comprising the steps of:

preparing interest compatibility scores based on expressed Interests of the members of the social network; and

computing a compatibility score between a first member of the social network and a second member of the social network based on expressed interests of the first member, expressed interests of the second member, and the interest compatibility scores between the expressed interests of the first member and the expressed interests of the second member.

Example 1 Analysis

1. The said method for scoring compatibility between the social network users is nothing but a business method which shall be used commercially. Thus the subject matter of the instant invention cannot be allowed u/s 3(k) of The Patents Act, 1970.
2. The said method for scoring compatibility between the social network users, say estimating the probability and dividing the estimated probabilities from the resultant product, is merely a mathematical method which is not allowable u/s 3(k) of The Patents Act, 1970.
3. The subject matter of the instant invention, say the method for computing compatibility score, is based on a scheme/predefined set of rules which cannot be allowed u/s 3(m) of The Patents Act, 1970.

Example 2 of Ineligible Claims

1. A method of operating a computer network search apparatus for generating a result list of items representing a match with information entered by a user through an input device connected to the computer network, the search apparatus comprising a computer system operatively connected to the computer network and the method comprising:

storing a plurality of items in a database, each item comprising information to be communicated to a user and having associated with it at least one keyword, an information provided and a bid amount;

receiving a keyword entered by a user through an input device;

searching the stored items and identifying items representing a match with the key word entered by the user;

ordering the identified items using the bid amounts for the identified items, and generating a result list including the ordered, identified items;

providing the result list to the user;

receiving a request from the user for information regarding an item selected from the result list;

charging to an account of the information provider associated with the selected item the bid amount associated with the selected item; and

providing information providers with authenticated login access to permit an information provider to modify at least the bid amount associated with the information provider's listing;

wherein the computer system sends an indication of the status of the information provider's account to the information provider in response to the occurrence of a predetermined condition.

Example 2 Analysis

1. The claim invention relates a software technology for operating a computer network search apparatus for generating a result list of items representing a match with information entered by a user through an input device connected to the computer network, the search apparatus comprising a computer system operatively connected to the computer network.
2. The claim is directed towards a business method.
3. The method comprises a database where several items are stored; each item contains information to be sent to a user which is associated with at least one key word, an information provider and a bid amount. The user enters the key word, from the stored items the item matching the key word is identified, then on the box of the associated bid amounts a result list is generated in the order of the bid amounts. This list is given to the user. When the user requests for information with reference to one item of the result list. The amount of the information provider associated with this item is charged with the bid amount associated with the selected item. The method provided for modification of the bid amount by the information provider with the authenticated login access. The ranking in the list depends on the bid amount.
4. **The invention claimed is not for the machine but for the method.**
5. The subject matter of the instant invention is falling in the category of “method of doing business”, which cannot be allowed u/s 3(k) of The Patents Act, 1970.

Tips for Allowability of Eligible Subject matter

- Add **meaningful limitations** in claims
 - Add a specific limitation other than what is well-understood, routine and conventional in the field, or adding unconventional steps that confine the claim to a particular useful application.
 - Add a specific limitation to prove that the method as claimed in the invention goes beyond the “normal” physical interaction between the software and the hardware on which it runs.
- Add additional elements in the claim, wherein the additional elements must be **more than a drafting effort**.
- Add a hardware limitation to claim elements for e.g. add a memory, a processor, a controller , a CD-ROM and etc. to the claim elements.

Tips for Allowability of Eligible Subject matter

- Technical feature must relate to one of the following **technical advancement**:
 - whether the claimed technical feature has a technical contribution on a process which is carried on outside the computer.
 - whether the claimed technical feature operates at the level of the architecture of the computer.
 - whether the technical contribution is by way of change in the hardware or the functionality of hardware.
 - whether the claimed technical contribution results in the computer being made to operate in a new way.
 - in case of a computer program linked with hardware, whether the program makes the computer a better computer in the sense of running more efficiently and effectively as a computer.
 - whether the change in the hardware or the functionality of hardware amounts to technical advancement.
- Add sufficient description of technical features present in claims.
- Add a flow chart and/or diagram of the method that is used to perform the function.