CLAIMS,

1. A system for continually regenerating adaptive, structured, reports in association with an image, the system comprising:
    - an **imaging module [IM]** configured to output **images (I)**, of a patient's anatomy;
    - a **reader (R)**, with a **graphical user interface dashboard [GUI]**, configured to import said images (I) from said imaging module (IM) and configured to enable a user to read, and display, said **images (I)** per patient, said graphical user interface dashboard [GUI] enabling a user (doctor) to annotate, amend, modify, alter, edit, via inputs through said dashboard [GUI], said image (via its tags and / or labels);
    - a **report regeneration module (RGT)** configured to regenerate adaptive structured reports based on said read and displayed images and based on user (doctor's) input(s), by executing programming instructions for performing the steps of:
        - applying artificial intelligence algorithms, correlative to clinical diagnosis pertaining to the anatomy, to the received and displayed output images (I), in order to **graphically annotate each displayed image** (I) with a **vector-defined boundary tag (VT)** overlaid on the displayed image (I);
        - applying artificial intelligence algorithms, correlative to clinical diagnosis pertaining to the anatomy, to the received and displayed output images (I), in order to **classify each displayed image** (I) with a **classification label (CL)** in correlation with the displayed image (I);

- initializing a **report (RP)** to be generated and to be displayed on said **graphical user interface dashboard**, said **initial report** comprising **pre-defined fields** to be populated based on clinical diagnoses, said report being filled by:
    - applying **rule-based descriptor retrieval**, from templatised databases, correlating with each **vector-defined boundary tag (VT)**, the rule-based retrieved descriptor being used to fill a correlative pre-defined field of said initialized report;
    - applying **rule-based descriptor retrieval**, from templatised databases, correlating with each **classification label (CL)**, the rule-based retrieved descriptor being used to fill a correlative pre-defined field of said initialized report;
- allowing a doctor to select at least a **vector-defined boundary tag (VT)** from a plurality of **vector-defined boundary tags (VT)** seen on the image (I);
- allowing a doctor to select at least a **classification label (CL)** from a plurality of **classification labels** seen on the image (I);
- regenerating said **initial report**, to cause a **first regenerated report**, to be displayed on said **graphical user interface dashboard**, said **first regenerated report** comprising **pre-defined fields** to be populated based on clinical diagnoses, said **first regenerated report** being filled by:
    - applying **rule-based descriptor retrieval**, from templatised databases, correlating with each of the **selected vector-defined boundary tags (VT)**, the rule-

based retrieved descriptor being used to change a correlative pre-defined field of said regenerated report;

- applying **rule-based descriptor retrieval**, from templatised databases, correlating with each of the **selected classification label**, the rule-based retrieved descriptor being used to change a correlative pre-defined field of said regenerated report;

- allowing a doctor to **change** at least a **parameter** of the **vector-defined boundary tags (VT)**;
- allowing a doctor to **select** a **sub-classification label (SCL)** pertaining to a **classification label (CL)**, each classification label being associated with various levels of detailed templates, characterised for selection, correlative to detailed levels in the clinical diagnoses;
- regenerating said **first regenerated report**, to cause an **iteratively adapted regenerated report**, to be displayed on said **graphical user interface dashboard**, said **iteratively adapted regenerated report** comprising **pre-defined fields** to be populated based on clinical diagnoses, said **iteratively adapted regenerated report** being filled by:
    - applying **rule-based descriptor retrieval**, from templatised databases, correlating with each change of parameter of the **selected vector-defined boundary tags (VT)**, the rule-based retrieved descriptor being used to change a correlative pre-defined field of said regenerated report;

        - applying **rule-based descriptor retrieval**, from templatised databases, correlating with each change of parameter of the **selected classification label (CL)**, the rule-based retrieved descriptor being used to change a correlative pre-defined field of said regenerated report; and

- a **third master input mechanism (MIP3)** configured to allow a user (doctor) to select a third input, as **classification labels** correlative to '*conditions*' (CN), from a prepopulated list of classification labels, from a communicably coupled **conditions database (CDB)**, in correlation with read, and artificially intelligence parsed, image(s) per patient, the third master input mechanism (MIP3) comprising:
    - a **first set of slave input mechanisms (SIP1)**, communicably coupled to a corresponding **third master input mechanism (MIP3)** is configured;
    - a hierarchical tree structure defined such that for each first input, at the **second master input mechanism (MIP2)**, a corresponding **second set of slave input mechanisms (SIP2)** are triggered for enabling a user to enter a second input, correlative to the first input of conditions;
    - a **second input** or a **second user-engagement**, relates to **sub-conditions (SCN)**, and correlative **sub-classification labels (SCL)**, that are associated with the first set of pre-defined conditions.

2. A system as claimed in claim 1 wherein, said system comprising, for the purposes of initializing a basic / raw report, initially, a **report-structure configurator (RC)** configured to define a templatized structure of an *output report (RP), per modality*, with pre-defined fields of display.

3. A system as claimed in claim 1 wherein, said system comprising a **first master input mechanism (MIP1)** is configured to allow a user to select a modality of image, per patient, in correlation to report regeneration using said report regeneration module (RGT).

4. A system as claimed in claim 1 wherein, said system comprising an **artificial intelligence module (AIM)** configured to read said received **images (I)**, before its display on said **graphical user interface dashboard [GUI]**, to parse said images in order to graphically annotate each displayed image with a **vector-defined boundary tag (VT)**, the graphical annotation (**vector-defined boundary tag**) correlating to one or more clinical diagnosis of said image, the clinical diagnosis correlating to one or more conditions from a **conditions database (CDB)**.

5. A system as claimed in claim 1 wherein, said system comprising an **artificial intelligence module (AIM)** configured to read said received **images (I)**, before its display on said **graphical user interface dashboard [GUI]**, to parse said images in order to create and associate each image **classification labels (CL)** to be displayed on the **graphical user interface dashboard (GUI)**; the labels correlating to the one or more clinical diagnosis of the image, the clinical diagnosis correlating to one or more conditions from a **conditions database (CDB)**.

6. A system as claimed in claim 1 wherein, said system comprising a **second master input mechanism (MIP2)** configured to allow a user (doctor) to enter / select / modify a second input, a **vector-defined boundary tag (VT)** as '*conditions*' (CN) (or clinical diagnosis), from a prepopulated list of conditions, from a communicably coupled **conditions database (CDB)**, in correlation with read image(s) per patient.

7. A system as claimed in claim 1 wherein, said **vector-defined boundary tags (VT)**, being transparent annotations defined by a solid boundary box wherein each tag defines an area of the image which said artificial intelligence module intends to highlight as a determined condition relevant to such defined location.

8. A system as claimed in claim 1 wherein, said **vector-defined boundary tags (VT)**, being configured with a plurality of parameters, specific to that tag (VT), such as a spatial parameter (being a boundary box), a temporal parameter (being a temporal stamp), a qualitative parameter (being a degree of relevance), and a quantitative parameter (being a degree of severity).

9. A system as claimed in claim 1 wherein, for each of said **vector-defined boundary tags (VT)**, considering a spatial parameter, a boundary box is overlaid on a portion of the image, the boundary box being correlative to a clinical diagnosis relevant to that portion of said image.

10. A system as claimed in claim 1 wherein, for each of said **vector-defined boundary tags (VT)**, considering a temporal parameter, a temporal stamp is overlaid on a portion of the image, the temporal stamp is correlative to

temporal data associated with a clinical diagnosis relevant to that portion of the image.

11. A system as claimed in claim 1 wherein, for each of said **vector-defined boundary tags (VT)**, considering a qualitative parameter, a degree of relevance legend is overlaid on a portion of the image, the qualitative legend is correlative to relevance data associated with a clinical diagnosis relevant to that portion of the image.

12. A system as claimed in claim 1 wherein, for each of said **vector-defined boundary tags (VT)**, considering a quantitative parameter, a degree of severity legend is overlaid on a portion of said image, the quantitative legend being correlative to severity data associated with a clinical diagnosis relevant to that portion of the image.

13. A system as claimed in claim 1 wherein, for each of said **vector-defined boundary tags (VT)**, each parameter, of said vector-defined tag, is further correlated with each condition from a conditions database, in that, the **conditions database (CDB)** is parameter dependent such that for each condition-parameter combination, a descriptor is defined in the **descriptor database (DDB)** wherein upon selection of a condition and a relevant correlated parameter, a pre-defined descriptor is retrieved in said report (RP).

14. A system as claimed in claim 1 wherein, for each of said **vector-defined boundary tags (VT)**, each parameter, of said vector-defined tag, is further correlated with each condition from a conditions database, in that, the **conditions database (CDB)** is parameter dependent such that for each

condition-parameter combination, a descriptor is defined in the **descriptor database (DDB)** wherein upon selection of a condition and a relevant correlated parameter, a pre-defined descriptor is retrieved in said report (RP), characterised in that, a change in a parameter of said vector-defined boundary tag causes a change in the parameter which causes a change in the descriptor of the report (RP).

15. A system as claimed in claim 1 wherein, said **conditions database (CDB)** is dynamically configured and coupled with said **descriptor database (DDB)** such that any change of parameter (spatial, temporal, qualitative, quantitative) of the vector-defined boundary tag cause a change (by means of retrieval from a database) in selection of a descriptor(s) from the descriptor database.

16. The system as claimed in claim 1 wherein, the **vector-defined boundary tags (VT)** defining:
    - **spatially**, a boundary box overlaid on a portion of said image, said boundary box correlative to a clinical diagnosis relevant to that portion of said image;
    - **temporally**, a temporal stamp overlaid on a portion of said image, said temporal stamp correlative to temporal data associated with a clinical diagnosis relevant to that portion of said image;
    - **qualitatively**, a degree of relevance legend overlaid on a portion of said image, said qualitative legend correlative to relevance data

associated with a clinical diagnosis relevant to that portion of said image;

- **quantitatively**, a degree of severity legend overlaid on a portion of said image, said quantitative legend correlative to severity data associated with a clinical diagnosis relevant to that portion of said image.

17. The system as claimed in claim 1 wherein, displacement and / or editing of a parameter of the **vector-defined boundary tag (VT)** causing:
    - correlative change in a **spatial parameter** of a boundary box, thereby causing a correlative change in a clinical diagnosis relevant to that portion of said image, in turn, causing a change in a descriptor of said report.

18. The system as claimed in claim 1 wherein, displacement and / or editing of a parameter of the **vector-defined boundary tag (VT)** causing:
    - correlative change in **a temporal stamp**, thereby causing a correlative change in a clinical diagnosis relevant to that portion of said image, in turn, causing a change in a descriptor of said report.

19. The system as claimed in claim 1 wherein, displacement and / or editing of a parameter of the **vector-defined boundary tag (VT)** causing:
    - correlative change in a **qualitative legend**, thereby causing a correlative change in a degree of relevance relevant to that portion of said image, in turn, causing a change in a descriptor of said report.

20. The system as claimed in claim 1 wherein, displacement and / or editing of a parameter of the **vector-defined boundary tag (VT)** causing:
    - correlative change in a **quantitative legend**, thereby causing a correlative change in a degree of severity relevant to that portion of said image, in turn, causing a change in a descriptor of said report.

21. The system as claimed in claim 1 wherein, change in parameter(s) of the **vector-defined boundary tags (VT)** comprising:
    - allowing a doctor to change the **spatial parameters** of the **vector-defined boundary tags**;
    - allowing a doctor to change the **temporal parameters** of **the vector-defined boundary tags**;
    - allowing a doctor to change the **qualitative parameters** of **the vector-defined boundary tags**; and
    - allowing a doctor to change the **quantitative parameters** of **the vector-defined boundary tags**.

22. The system as claimed in claim 1 wherein, the **classification label (CL)** comprising a **sub-classification level (SCL)** correlative to said image (I), wherein a classification label (CL) corresponding to a clinically-diagnosed condition found in said image (I) and a sub-classification label corresponding to a clinically-diagnosed sub-condition found in said image (I).

23. The system as claimed in claim 1 wherein, changes in **classification label** causing:

- correlative changes in a descriptor, pertaining to clinical diagnosis, of said report (RP).

24. The system as claimed in claim 1 wherein, changes in **sub-classification label** causing:
    - correlative changes in a descriptor, pertaining to clinical diagnosis, of said report (RP).

25. The system as claimed in claim 1 wherein, templatised databases comprise descriptor databases (DDB) coupled with conditions database (CDB).