

We claim:

1. An adapter device (102) for extending television content comprising:
 - a) a plurality of input interface (103) configured to receive
5 television content through a first connector (112);
 - b) a plurality of processing units (104) configured to:
 - process received television content in real-time and provide processed television content in different resolutions and formats to a plurality of broadcasting units (106); and
 - 10 – by-pass received television content or processed television content directly to a plurality of output interface (105) in accordance with output selection of a user of the adapter device (102);
 - c) the plurality of output interface (105) configured to send television content from the adapter device (102) to a plurality of visual
15 display units (101) through a second connector (113);
 - d) the plurality of broadcasting units (106) configured to:
 - establish a Wi-Fi network (111) to connect first set of plurality of portable user devices (127) and form a wireless intranet network;
 - 20 – broadcast processed television content to the first set of plurality of portable user devices (127) to receive and render live stream link in which every television content has different live stream links to be established based on the television content opted on each of the first set of plurality of portable user devices (127) using the wireless intranet
25 network;
 - e) a power supply (109);
 - f) a microcontroller (107);
 - g) a plurality of Wi-Fi extenders (117) configured to extend Wi-Fi strength or signal coverage of the established Wi-Fi network (111) by
30 the plurality of broadcasting units (106) to a second set of plurality of portable user devices (128) and providing processed television content to the second set of plurality of portable user devices (128) to receive and

render live stream link in which every television content has different live stream links to be established based on the television content opted on each of the second set of plurality of portable user devices (128) using the wireless intranet network;

5 wherein the plurality of broadcasting unit (106) further configured to:

– establish a captive portal for connecting first set of plurality of portable user devices (127) and a second set of plurality of portable user devices (128) to receive and render the live stream link automatically after selecting the established Wi-Fi network (111);

10 – establish a local Domain name for the connected first set of plurality of portable user devices (127) and second set of plurality of portable user devices (128) to receive and render client webpages along with the live stream links by entering local domain name in their browser's address bar or after connecting to the established Wi-Fi network
15 (111,118);

– establish a Bluetooth network (110) to connect the plurality of Bluetooth enabled user devices;

 wherein the plurality of Wi-Fi extenders (117) are Wi-Fi repeaters, Wi-Fi extenders, wireless repeaters, Wi-Fi routers and switches connected
20 and configured through wire or wireless with the device;

 wherein the plurality of Bluetooth enabled user devices configured to receive audio signals;

 wherein the formats are transcoded and encoded formats.

25 2. The device (102) as claimed in claim 1, further comprising an internet module (124) which is connected through wire or wireless with the external plurality of internet access point (125) and configured to:

– establish internet access to the adapter device (102) and enable communication to external cloud applications to manage the
30 adapter device (102) activation or deactivation or subscriptions or licenses;

– enable communication to external plurality of cloud applications for authorizing the first set of plurality of portable user devices

(127) and second set of plurality of portable user devices (128) to view television content that is considered to be pay per view or paid or authorized view only or authorized through external payment gateway systems; and

5 – enable communication to external plurality of cloud application of internet television channel broadcast systems and establish access to live stream link and pass the internet television content to the plurality of processing units (104).

10 3. The device (102) as claimed in claim 2, wherein internet television content processed in real-time and broadcasted locally as live stream link through wireless intranet network (111,118).

 4. The device (102) as claimed in claim 2, wherein connected
15 first set of plurality of portable user devices (127) and second set of plurality of portable user devices (128) watch internet television content in real-time through wireless intranet network (111, 118).

 5. The device (102) as claimed in claim 2, wherein the internet
20 module (124) is configured to provide Internet access to the first set of plurality of portable user devices (127) and second set of plurality of portable user devices (128) to stay connected over internet and to receive push notifications from other applications while rendering the television content live stream on their portable devices.

25 6. The device (102) as claimed in claim 1, wherein the wireless intranet network is an intranet or WLAN or LAN with or without internet.

 7. The device (102) as claimed in claim 1, further comprising
30 data storage module (126) configured to provide high speed access to all the components of the adapter device (102) to store and retrieve data.

 8. The device (102) as claimed in claim 1, wherein the plurality of broadcasting units (106) is configured to connect and use existing Wi-Fi

intranet or internet or WLAN or LAN network (501) to connect the second set of plurality of portable user devices (128) through unique mac address or local domain name assigned in existing Wi-Fi network (501) by administrator.

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9. The device (102) as claimed in claim 1, wherein the plurality of broadcasting units (106) further configured to establish a plurality of servers to connect the first set of plurality of portable user devices (127) and the second set of plurality of portable user devices (128).

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10. The device (102) as claimed in claim 1, wherein the plurality of broadcasting units (106) further comprising plurality of client web pages with user interface having inbuilt media players compatible to render the broadcasted live stream link in the connected first set of plurality of portable user devices (127) and second set of plurality of portable user devices portable devices (128) through captive portal or browsers or custom client application.

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11. The device (102) as claimed in claim 1, wherein the television content is live video input from electronic devices, television or channel signal, output from large format display screen, a video, an audio, a video and audio.

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12. The device (102) as claimed in claim 1, wherein the television content is digital or analogue signal, compatible to view in the plurality of visual display units (101).

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13. The device (102) as claimed in claim 1, wherein the first connector (112) is HDMi, AV, VGA, DVI, S-Video, SDI, USB, LAN, RF pin, display port, RCA connector.

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14. The device (102) as claimed in claim 1, wherein the second connector (113) is HDMi, AV, VGA, DVI, S-Video, SDI, USB, LAN, RF pin display port, RCA connector.

15. The device (102) as claimed in claim 1, wherein the live stream link comprises of video only, video and audio, audio only.

5 16. The device (102) as claimed in 1, wherein the plurality of visual display units (101) is large format display screen.

17. The device (102) as claimed in 1, wherein the plurality of visual display units (101) is television or monitor screen.

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18. The device (102) as claimed in claim 1, further comprising a coupling means (201) enabling the adapter device (102) to connect with plurality of other adapter devices (102₁....102_n).

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19. The device (102) as claimed in claim 18, wherein the coupling means (201) configured to connect the adapter device (102) with plurality of other adapter devices (102₁....102_n) in order to form a cluster (202).

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20. The device (102) as claimed in claim 18, wherein the adapter device (102) is configured to act as a load balancer.

21. A method (300) for extending television content by a system, the method comprising the steps of:

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establishing (302) an IP address for the system with or without local domain name;

establishing (304) a wireless intranet network for a plurality of portable user devices to get connected;

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receiving (306) a plurality of input signals that contains a plurality of television content;

processing (308) the received plurality of input signals in real-time;

connecting (310) the plurality of portable user devices with the established wireless intranet network;

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broadcasting (312) the processed plurality of input signals as plurality of live streams along with channel change options to the

connected plurality of portable user devices for accessing and rendering the plurality of live streams via the connected wireless intranet network.

22. The method (300) as claimed in claim 21, further comprising
5 a step of assigning a unique local IP to the connected plurality of portable user devices enabling further communication between the system and each other.

23. The method (300) as claimed in claim 21, wherein the step
10 of processing is carried out by transcoding and/or encoding processes.

24. The method (300) as claimed in claim 21, wherein the wireless intranet network is a Wi-Fi access point with or without internet.

15 25. The method (300) as claimed in claim 21, wherein the plurality of portable user devices are portable devices such as mobile phones, tablets and laptops.

26. The method (300) as claimed in claim 21, wherein the
20 plurality of input signals are digital or analogue signals.

27. The method (300) as claimed in claim 21, wherein the plurality of input signals are internet television or IPTV live stream.

25 28. The method (300) as claimed in claim 21, wherein the plurality of television content is digital or analogue signal, compatible to view in the plurality of television, monitor or large format display.

30 29. The method (300) as claimed in claim 21, wherein the plurality of live streams comprises of video only, video and audio, audio only.

30. The method (300) as claimed in claim 29, wherein the
35 plurality of live streams is configured with embedded media players.

31. The method (300) as claimed in claim 30, wherein embedded media player is an inbuilt-media player of the system to render the live stream in the connected plurality of portable user devices.

5 32. The method (300) as claimed in claim 21, wherein the channel change options are selected to change and render different live steam of different input signals.

10 33. The method (300) as claimed in claim 21, wherein the connected plurality of portable user devices access & renders the plurality of live streams automatically through captive portal while connecting with the wireless intranet network.

15 34. The method (300) as claimed in claim 21, wherein the connected plurality of portable user devices access & renders the plurality of live streams through browsers by accessing system's local domain name or IP address.

20 35. The method (300) as claimed in claim 21, wherein the connected plurality of portable user devices access & renders the plurality of live streams through custom client application.

25 36. The method (300) as claimed in claim 21, wherein the connected plurality of portable user devices renders all received live streams in an embedded media player of the system or on their default media player.

30 37. The method (300) as claimed in claim 21, wherein the connected plurality of portable user devices renders different live stream as per the selected channel options on respective plurality of portable user devices.

35 38. The method (300) as claimed in claim 21, wherein the channel change options enable multi-channel view options on every connected plurality of portable user devices.

39. The method (300) as claimed in claim 21, wherein the plurality of live streams access to connected portable devices is further configured with payment gateway systems to grant access after successful payment transaction.

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40. The method (300) as claimed in claim 21, wherein the plurality of live streams access to connected portable devices is further configured with access code systems to grant access after successful authorization of entered access code.

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41. A method (400) for extending television content, the method comprising the steps of:

receiving (402) the television content from a plurality of input interface (103);

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processing (404) the received television content in real-time by a plurality of processing units (104);

providing (406) processed television content in different resolutions and formats to a plurality of broadcasting units (106);

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establishing (408) a Wi-Fi network (111) by a plurality of broadcasting units (106);

broadcasting (410) the processed television content as live stream link in which every television content has different live stream links to be established based on the television content opted on each of a first set of plurality of portable user devices (127) and a second set of plurality of portable user devices (128) using a wireless intranet network.

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42. The method (400) as claimed in claim 41, further comprising a step of connecting the first set of plurality of portable user devices (127) to the established Wi-Fi network (111) and forming the wireless intranet network.

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43. The method (400) as claimed in claim 42, wherein the wireless intranet network is an intranet or WLAN or LAN with or without internet.

5 44. The method (400) as claimed in claim 41, further comprising a step of extending Wi-Fi strength or signal coverage of the established Wi-Fi network (111) to the second set of plurality of portable user devices (128) by using a plurality of Wi-Fi extenders (117).

10 45. The method (400) as claimed in claim 44, wherein the step of extending further comprising the steps of connecting and using existing Wi-Fi intranet or internet or WLAN or LAN network (501) to connect the second set of plurality of portable user devices (128) through unique mac address or local domain name assigned in existing Wi-Fi network (501) by
15 administrator.

 46. The method (400) as claimed in claim 44, wherein the plurality of Wi-Fi extenders (117) are Wi-Fi repeaters, Wi-Fi extenders, wireless repeaters, Wi-Fi routers and switches connected and configured
20 through wire or wireless with the adapter device (102).

 47. The method (400) as claimed in claim 41, further comprising a step of establishing a Bluetooth network (110) to connect a plurality of Bluetooth enabled user devices.

25 48. The method (400) as claimed in claim 47, wherein the plurality of Bluetooth enabled user devices configured to receive audio signals.

30 49. The method (400) as claimed in claim 41, further comprising a step of establishing a captive portal for connecting first set of plurality of portable user devices (127) and second set of plurality of portable user devices (128) to receive and render the live stream link automatically after selecting the established Wi-Fi network (111,118).

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50. The method (400) as claimed in claim 41, further comprising a step of providing plurality of client web pages with user interface having inbuilt media players compatible to render the broadcasted live stream link in the connected first set of plurality of portable user devices (127) and
5 second set of plurality of portable user devices portable devices (128) through captive portal or browsers or custom client application.

51. The method (400) as claimed in claim 41, further comprising a step of establishing a local Domain name for the connected first set of
10 plurality of portable user devices (127) and second set of plurality of portable user devices (128) to receive and render client webpages along with the live stream links by entering local domain name in their browser's address bar after connecting to the established Wi-Fi network (111,118).

52. The method (400) as claimed in claim 41, further comprising a step of establishing a plurality of servers by the plurality of broadcasting units (106) to connect the first set of plurality of portable user devices (127) and second set of plurality of portable user devices (128).

53. The method (400) as claimed in claim 41, further comprising a step of by-passing receiving television content or processed television content directly to the plurality of output interface (105) in according with output selection of the user.

54. The method (400) as claimed in claim 53, wherein the step of by-passing further comprising a step of transmitting television content from the adapter device (102) to a plurality of visual display units (101).

55. The method (400) as claimed in claim 54, wherein the plurality of visual display units (101) is large format display screen.

56. The method (400) as claimed in claim 54, wherein the plurality of visual display units (101) is television or monitor screen.

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57. The method (400) as claimed in claim 54, wherein the television content is compatible to view in the plurality of visual display units (101).

5 58. The method (400) as claimed in claim 41, wherein the television content is digital or analogue signal.

59. The method (400) as claimed in claim 41, wherein the formats are transcoded and encoded formats.

10 60. The method (400) as claimed in claim 41, wherein the television content is live video input from electronic devices, television or channel signal, output from large format display screen, a video, an audio, a video and audio.

15 61. The method (400) as claimed in claim 41, wherein the live stream link comprises of video only, video and audio, audio only.

20 62. The method (400) as claimed in claim 41, further comprising a step of connecting the adapter device (102) with plurality of other adapter devices (102₁... 102_n) by coupling means (201).

25 63. The method (400) as claimed in claim 62, wherein the step of connecting further comprising a step of forming a cluster (202) by connecting the adapter device (102) with plurality of other adapter devices (102₁....102_n).

30 64. The method (400) as claimed in claim 62, wherein the adapter device (102) is configured to act as a load balancer.

35 65. The method (400) as claimed in claim 41, further comprising a step of establishing internet access, by an internet module (124), to the adapter device (102) and enabling communication to external cloud applications to manage the adapter device (102) activation or deactivation or subscriptions or licenses.

66. The method (400) as claimed in claim 65, further comprising
a step of enabling communication, by the internet module (124), to
external plurality of cloud applications for authorizing the user to view
television content that is considered to be pay per view or paid or
5 authorized view only or authorized through external payment gateway
systems.

67. The method (400) as claimed in claim 65, further comprising
a step of enabling communication, by the internet module (124), to
10 external plurality of cloud application of internet television channel
broadcast systems and establish access to live stream link and pass the
internet television content to the plurality of processing units (104).