

*Core Wireless Licensing v. LG  
Electronics: User Interfaces &  
Patent-Eligible Subject Matter*

Presented by Kirk Coombs, February 2, 2018

# Background

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- Priority back to “dumb phone” days (PCT filed 07/27/2001)
- Two US Patents, Issued 04/30/2013 & 04/29/2014
- LG Electronics appealed DC’s decision (ED,TX), which denied LG’s motion for SJ that claims are ineligible under §101, and denying LG’s motion for JMOL that the claims are anticipated and not infringed
- Federal Circuit Decision, 01/25/2018 (affirming all counts)

# The Patents (US 8,434,020 & US 8,713,476)

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## **Problem**

- “One of the problems facing the designers of computing devices with small screens is how to allow the user to navigate quickly and efficiently to access data and activate a desired function. Computing devices with small screens tend to need data and functionality divided into many layers or views: for example, the small display size of mobile telephones has conventionally meant that several hierarchies of functions have to be offered to a user.”

# The Patents (US 8,434,020 & US 8,713,476)

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## Problem

- “...a user interface typically has to demonstrate or make explicit the changing internal status of the mobile telephone as navigation proceeds. For example, to select or initiate a function (e.g. to open an address book function, enter a PIN security number or to alter the ring melody) a user has to understand (a) how to navigate to that function in order to select that function and (b) that the status of the telephone is such that the function can be selected or initiated.”
- “The **technical problem** of effectively enabling the user to understand this changing internal state has to date been inadequately addressed.”

# The Patents (US 8,434,020 & US 8,713,476)

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## Solution

- “The presently disclosed embodiments offer, in one implementation, a snap-shot view which brings together, in one summary window, a limited list of **common functions** and **commonly accessed stored data** which itself can be reached directly from the main menu listing some or all applications.”
- “For example, a user can get to the summary window in just two steps--first, launch a main view which shows various applications; then, launch the appropriate summary window for the application of interest. This is far faster and easier than conventional navigation approaches. Once the summary window is launched, core data/functionality is displayed and can be accessed in more detail and can typically be reached simply by selecting that data/functionality. Hence, only three steps may be needed from start up to reaching the required data/functionality; navigating from between each step is clear and straightforward.”

# The Patents (US 8,434,020 & US 8,713,476)

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## Example

“As an example, the main view may be an Application Launcher for several applications such as `Messages`, `Contacts`, `Calendar` and `Phone`. The Application Launcher view is then presented as a standard scrolling list of application names with appropriate application icons next to them. The list is vertical and only one application is presented per line. Standard highlight functions apply...”



Figure 1

# The Patents (US 8,434,020 & US 8,713,476)

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## Example

- “The innovative summary window functionality can be accessed as follows: should the highlight rest on the name of an application in the App Launcher for a certain amount of time (say a 1.2 second timeout), the summary window (the "App Snapshot") drops down from the highlight bar. The App Snapshot for any given application is a window which includes commonly requested data associated with that application and links to common functionality in that application.”
- “When an item in the App Snapshot is selected (e.g. by being highlighted and then selected using a conventional selection technique such as pressing a right cursor), the device displays the relevant data in the application details view, or displays the relevant screen offering the relevant functionality. The required application may be automatically opened when the item in the App Snapshot is selected. The App Snapshot can therefore display data from an application and functions of that application without actually opening the application up...”

# The Patents (US 8,434,020 & US 8,713,476)

## Example



Figure 2



Figure 3



# The Patents: US 8,434,020

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## **Claim 1:**

A computing device comprising a display screen, the computing device being configured to display on the screen a main menu listing at least a first application, and additionally being configured to display on the screen an application summary window that can be reached directly from the main menu, wherein the application summary window displays a limited list of *at least one function* offered within the first application, each *function* in the list being selectable to launch the first application and *initiate the selected function*, and wherein the application summary window is displayed while the application is in an un-launched state.

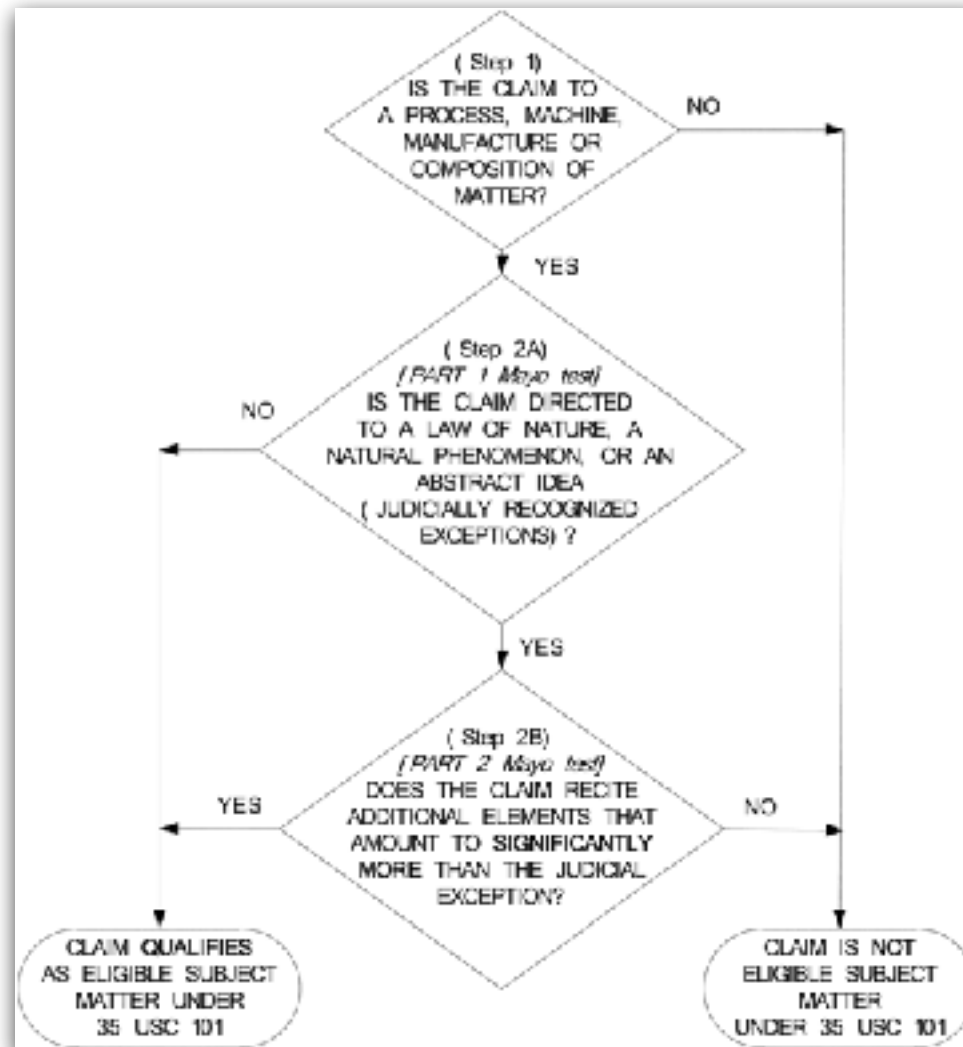
# The Patents: US 8,713,476 (Continuation)

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## **Claim 1:**

A computing device comprising a display screen, the computing device being configured to display on the screen a menu listing one or more applications, and additionally being configured to display on the screen an application summary that can be reached directly from the menu, wherein the application summary displays a limited list of *data* offered within the one or more applications, each of the *data* in the list being selectable to launch the respective application and *enable the selected data to be seen within the respective application*, and wherein the application summary is displayed while the one or more applications are in an un-launched state.

# Alice/Mayo Analysis: Quick Review



# District Court Analysis

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- It held that the claims are **not** directed to an abstract idea because, even crediting LG's characterization of the claims as directed to "displaying an application summary window while the application is in an unlaunched state," the concepts of "application," "summary window," and "unlaunched state" are specific to devices like computers and cell phones.
- It explained that "LG identifie[d] no analog to these concepts outside the context of such devices."
- It further noted even "if claim 1 were directed to an abstract idea, it would still be patent eligible at least because it passes the machine-or-transformation test."



# Federal Circuit's §101 Analysis (de novo)

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- **Skipped Step 1**
- **Part 2A (step 1): Standards**
  - “First, we “determine whether the claims at issue are directed to a patent ineligible concept.””
  - “At step one, we must “articulate what the claims are directed to with enough specificity to ensure the step one inquiry is meaningful.””
  - “We also ask whether the claims are directed to a specific improvement in the capabilities of computing devices, or, instead, “a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.”” (*Enfish, LLC v. Microsoft*)

# Federal Circuit's §101 Analysis (de novo)

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- **Part 2A (step 1, cont.): Prior Holdings**

- "We previously have held claims focused on **various improvements of systems** directed to patent eligible subject matter under § 101."
- "...in *Enfish*, we held claims reciting **a self-referential table for a computer database** eligible under step one because the claims were directed to a particular improvement in the computer's functionality. That the invention ran on a general-purpose computer did not doom the claims because unlike claims that merely "add[] conventional computer components to well-known business practices," the claimed self-referential table was "a specific type of data structure designed to improve the way a computer stores and retrieves data in memory."

# Federal Circuit's §101 Analysis (de novo)

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- **Part 2A (step 1, cont.): Prior Holdings**

- “In *Thales*, we held claims reciting an **improved method of utilizing inertial sensors** to determine position and orientation of an object on a moving platform not directed to an abstract idea or law of nature. We noted that even though the system used **conventional sensors** and a **mathematical equation**, the claims specified a **particular configuration** of the sensors and a **particular method** of utilizing the raw data that eliminated many of the complications inherent in conventional methods.”

# Federal Circuit's §101 Analysis (de novo)

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- **Part 2A (step 1, cont.): Prior Holdings**
  - “In *Visual Memory*, we held claims directed to an **improved computer memory system with programmable operational characteristics defined by the processor** directed to patent-eligible subject matter. The claimed invention provided flexibility that prior art processors did not possess, and obviated the need to design a separate memory system for each type of processor.”



# Federal Circuit's §101 Analysis (de novo)

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- **Part 2A (step 1, cont.): Prior Holdings**

- “...in *Finjan* we held claims directed to a **behavior-based virus scanning method** directed to patent eligible subject matter because they "employ[] a new kind of file that enables a computer security system to **do things it could not do before**," including "accumulat[ing] and utiliz[ing] newly available, behavior-based information about potential threats." The claimed behavior-based scans, in contrast to prior art systems which searched for matching code, enabled more "nuanced virus filtering" in analyzing whether "a downloadable's code . . . performs potentially dangerous or unwanted operations." We held the claims "therefore directed to a non-abstract improvement in functionality, rather than the abstract idea of computer security writ large."

# Federal Circuit's §101 Analysis (de novo)

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- **Part 2A (step 1, cont.): Claim Analysis**
  - “The asserted claims in this case are directed to **an improved user interface for computing devices**, not to the abstract idea of an index, as argued by LG on appeal.”
  - “Although the generic idea of summarizing information certainly existed prior to the invention, these claims are directed to a **particular manner** of summarizing and presenting information in electronic devices.”

# Federal Circuit's §101 Analysis (de novo)

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- **Part 2A (step 1, cont.): Claim Analysis**

- “...the '476 patent requires “an application summary that can be reached directly from the menu,” specifying a particular manner by which the summary window must be accessed.”
- “The claim further requires the application summary window list a limited set of data, “each of the data in the list being selectable to launch the respective application and enable the selected data to be seen within the respective application.” This claim limitation restrains the type of data that can be displayed in the summary window.
- “Finally, the claim recites that the summary window “is displayed while the one or more applications are in an un-launched state,” a requirement that the device applications exist in a particular state.”
- “These limitations disclose a **specific manner** of displaying a limited set of information to the user, rather than using conventional user interface methods to display a generic index on a computer.”

# Federal Circuit's §101 Analysis (de novo)

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- **Part 2A (step 1, cont.): Reasoning—tied to claim language**

- “The specification confirms that these claims disclose an **improved user interface** for electronic devices, particularly those with **small screens**.”
- “This language clearly indicates that the claims are directed to an **improvement in the functioning of computers**, particularly those with small screens.”
  - “The disclosed invention **improves the efficiency of using the electronic device** by bringing together "a limited list of common functions and commonly accessed stored data," which can be accessed directly from the main menu.”
  - “Displaying selected data or functions of interest in the summary window **allows the user to see the most relevant data or functions** "without actually opening the application up.”
  - “**The speed of a user's navigation through various views and windows can be improved** because it "saves the user from navigating to the required application, opening it up, and then navigating within that application to enable the data of interest to be seen or a function of interest to be activated.””
  - “Rather than paging through multiple screens of options, "**only three steps may be needed** from start up to reaching the required data/functionality.”

# Federal Circuit's §101 Analysis (de novo)

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- **Part 2B (step 2)**

- “Because we hold that the asserted claims are not directed to an abstract idea, we do not proceed to the second step of the inquiry. The claims are patent eligible under § 101.”

# Contrast: *Internet Patents Corp. v. Active Network, Inc.* (Ineligible)

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## **Claim 1:**

A method of providing an **intelligent user interface** to an on-line application comprising the steps of:

- furnishing a plurality of icons on a web page displayed to a user of a web browser, wherein each of said icons is a hyperlink to a dynamically generated on-line application form set, and wherein said web browser comprises Back and Forward navigation functionalities;
- displaying said dynamically generated on-line application form set in response to the activation of said hyperlink, wherein said dynamically generated on-line application form set comprises a state determined by at least one user input; and
- maintaining said state upon the activation of another of said icons, wherein said maintaining allows use of said Back and Forward navigation functionalities without loss of said state.

# Contrast: *Internet Patents Corp. v. Active Network, Inc.* (Ineligible)

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## Fed. Cir. Analysis

- “For the '505 Patent, the end result of "maintaining the state" is described as the innovation over the prior art, and the essential, "most important aspect:”

The most important aspect of the user interface of the present invention is not that it has tabs or that it enables a certain amount of non-sequential (non-linear) access to the various form sets within a virtual application, but that it maintains data state across all panes.

- “We agree with the district court that the character of the claimed invention is an abstract idea: the idea of retaining information in the navigation of online forms.”
- “As the district court observed, claim 1 contains **no restriction** on how the result is accomplished. The mechanism for maintaining the state is not described, although this is stated to be the essential innovation.”

# Contrast: *Apple, Inc. v. Ameranth, Inc.* (Ineligible)

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## **Claim 1:**

An information management and synchronous communications system for generating and transmitting menus comprising:

- a. a central processing unit,
- b. a data storage device connected to said central processing unit,
- c. an operating system including a graphical user interface,
- d. a first menu consisting of menu categories, said menu categories consisting of menu items, said first menu stored on said data storage device and displayable in a window of said graphical user interface in a hierarchical tree format,
- e. a modifier menu stored on said data storage device and displayable in a window of said graphical user interface,
- f. a sub-modifier menu stored on said data storage device and displayable in a window of said graphical user interface, and
- g. application software for generating a second menu from said first menu and transmitting said second menu to a wireless handheld computing device or Web page, wherein the application software facilitates the generation of the second menu by allowing selection of categories [sic] and items from the first menu, addition of menu categories to the second menu, addition of menu items to the second menu and assignment of parameters to items in the second menu using the graphical user interface of said operating system, said parameters being selected from the modifier and sub-modifier menus.



# Contrast: *Apple, Inc. v. Ameranth, Inc.* (Ineligible)

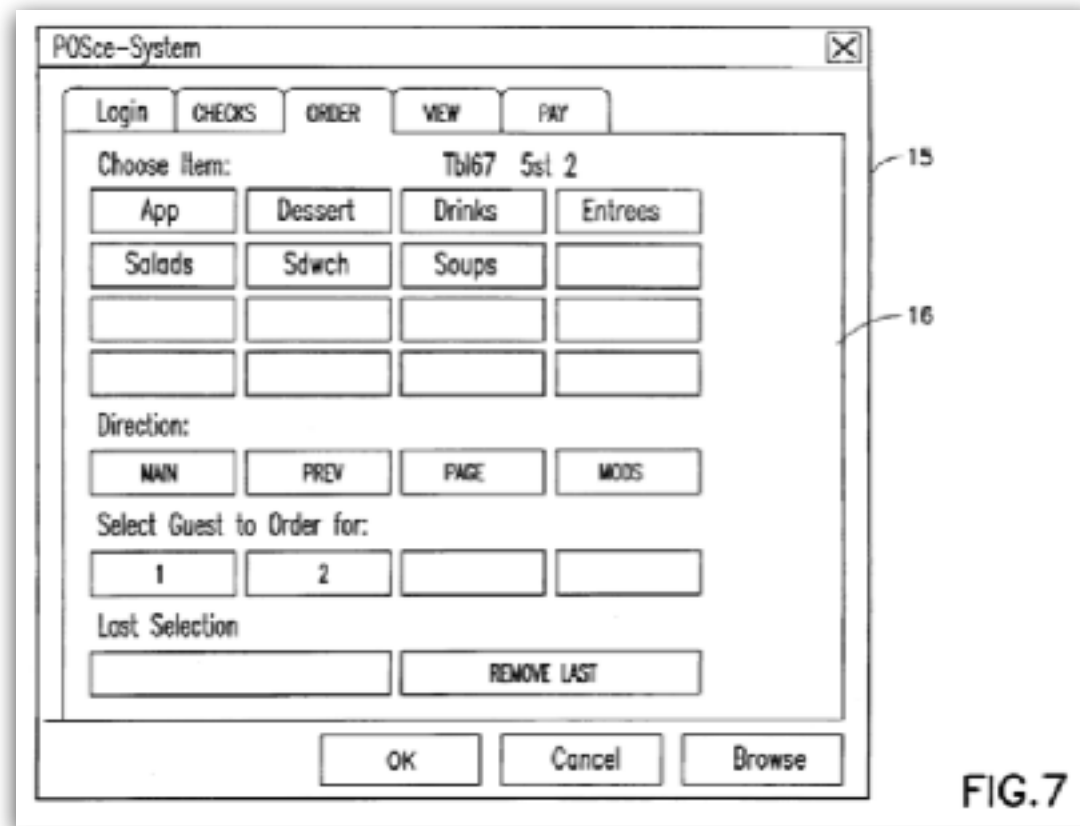


FIG. 7

# Contrast: *Apple, Inc. v. Ameranth, Inc.* (Ineligible)

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## **Fed. Cir. Analysis**

- “The specifications note that "ordering prepared foods has historically been done verbally, either directly to a waiter or over the telephone, whereupon the placed order is recorded on paper by the recipient or instantly filled." '850 patent col. 1 ll. 23-27; '733 patent col. 1 ll. 31-34. They explain that the "unavailability of any simple technique for creating restaurant menus and the like for use in a limited display area wireless handheld device or that is compatible with ordering over the internet ha[d] prevented widespread adoption of computerization in the hospitality industry.”
- Step 2A:
  - “...the Board determined that the claims in all three patents are directed to the abstract idea of "generating a second menu from a first menu and sending the second menu to another location.”
  - “We affirm the Board's conclusion that the claims in these patents are directed to an abstract idea. The patents claim systems including menus with particular features. They do not claim a particular way of programming or designing the software to create menus that have these features, but instead merely claim the resulting systems.”
- Step 2B: “We affirm the Board's conclusion in step two that the elements of the patents' claims — both individually and when combined — do not transform the claimed abstract idea into a patent-eligible application of the abstract idea. The patents can readily be understood as adding conventional computer components to well-known business practices.”

# Takeaways

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- Write a robust specification.
  - What is the technical problem with prior interfaces?
  - How does this new interface address this problem?
- Claim the actual improvement, not just the result.
- State the efficiencies of the new user interface.
  - Even if they just make user interaction more efficient.
- In arguments, identify how specific limitations improve functioning of computer system.