

APPENDIX C

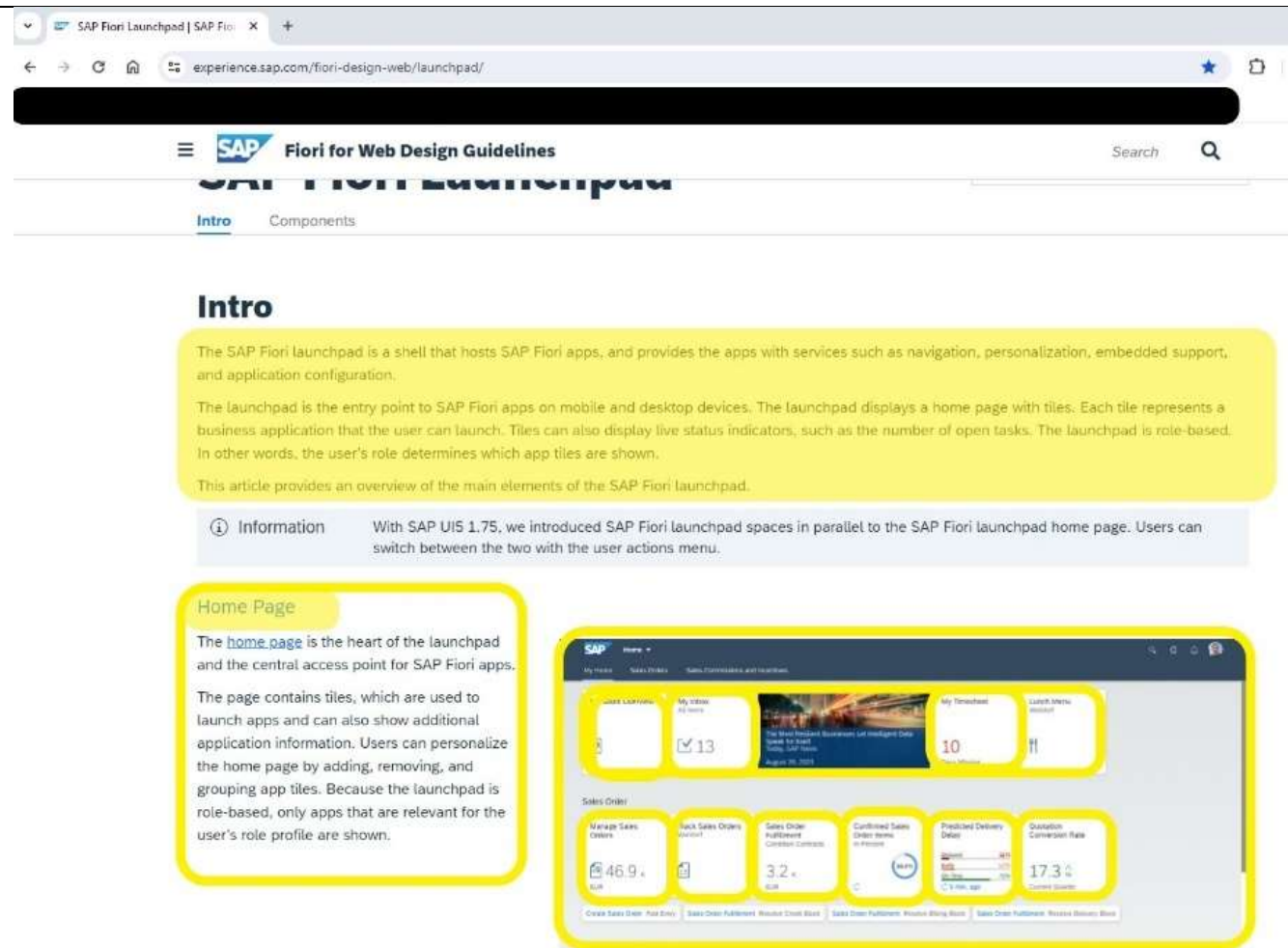
Preliminary Infringement Contentions for U.S. Patent 8,595,641

(Accused Instrumentalities: All SAP products using SAP Fiori technology (including Fiori versions 1, 2, 3, and/or Horizon))
(Specific products used with Fiori include at least SAP's S/4HANA, Business One, Business By Design, ECC, ERP,
and all supported applications)

'641 Patent Claim 1	
1(a). An apparatus serving as a user platform operated by a user to facilitate display of, and interaction with, secure user-centric information, the apparatus comprising:	The Accused Instrumentalities operate as a secure software apparatus running on computer hardware, serving as a user platform to facilitate and interact with data related to that user. The platform operates as the instantiation of the Accused Instrumentalities when they are used by a user. See https://help.sap.com/docs/ABAP_PLATFORM_NEW/a7b390faab1140c087b8926571e942b7/f951b50a07ce41deb08ced62711fe8b5.html Specifically, the Accused Instrumentalities include the “SAP Fiori launchpad [which] is the entry point to pps on mobile and desktop devices. It gives users the relevant information they need at a glance and centers n their needs and how they work.” Furthermore, “[t]he new design of the launchpad displays a panoramic ser interface. Users can focus on their daily work and still keep track of what's going on in other areas.” See https://help.sap.com/docs/ABAP_PLATFORM_NEW/a7b390faab1140c087b8926571e942b7/f951b50a07ce41deb08ced62711fe8b5.html The following excerpt demonstrates the display of secure user-centric information on any device used by the user:

	As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.
1(b). a display device to display a desktop for the user platform; at least one communication interface to facilitate wired and/or wireless communications via one or more transmission media; at least one memory to store processor-executable instructions; and at least one processor communicatively coupled to the display device, the at least one communication interface, and the at least one memory, wherein upon execution of the processor-executable instructions by the at least one processor, the at least one	The Accused Instrumentalities includes software to display SAP Fiori with application tiles on any device used by the user. "Each tile represents a business application that the user can launch." See https://experience.sap.com/fiori-design-web/launchpad/. The Accused Instrumentalities include display software for displaying SAP Fiori that can interact with hardware, such as monitors. The Accused Instrumentalities include software to facilitate wired and wireless communications through hardware that is used, such as wired and wireless transceivers. The Accused Instrumentalities operate with software to act as memory and manage hardware memory while operating. The Accused Instrumentalities also perform actions because they include software processing components for running the software and managing a hardware processor. As shown by the excerpt below, SAP Fiori is a matrix of tiles and links that display and launch the corresponding apps on the Launchpad. Each of the links is a secure user-centric channel associated with an app, and that user's data can be sent to be displayed, and the user can interact with it.

processor manages display of and interaction with the secure user-centric information by:



<https://experience.sap.com/fiori-design-web/launchpad/>

Furthermore, the Accused Instrumentalities include a software display to SAP Fiori, which will manage a hardware display, as shown in the example below.

learning.sap.com/learning-journeys/learn-the-basics-of-sap-fiori/introducing-sap-fiori_c3915ced-ffd1-4127-a822-e217ff45fd72

SAP Learning

Learn Get Certified My Learning Explore SAP

/ Browse / Learning Journeys / Learning the Basics of SAP Fiori

Introducing SAP Fiori

After completing this lesson, you will be able to:

- Identify the dimensions of SAP Fiori
- Explain the principles of SAP Fiori

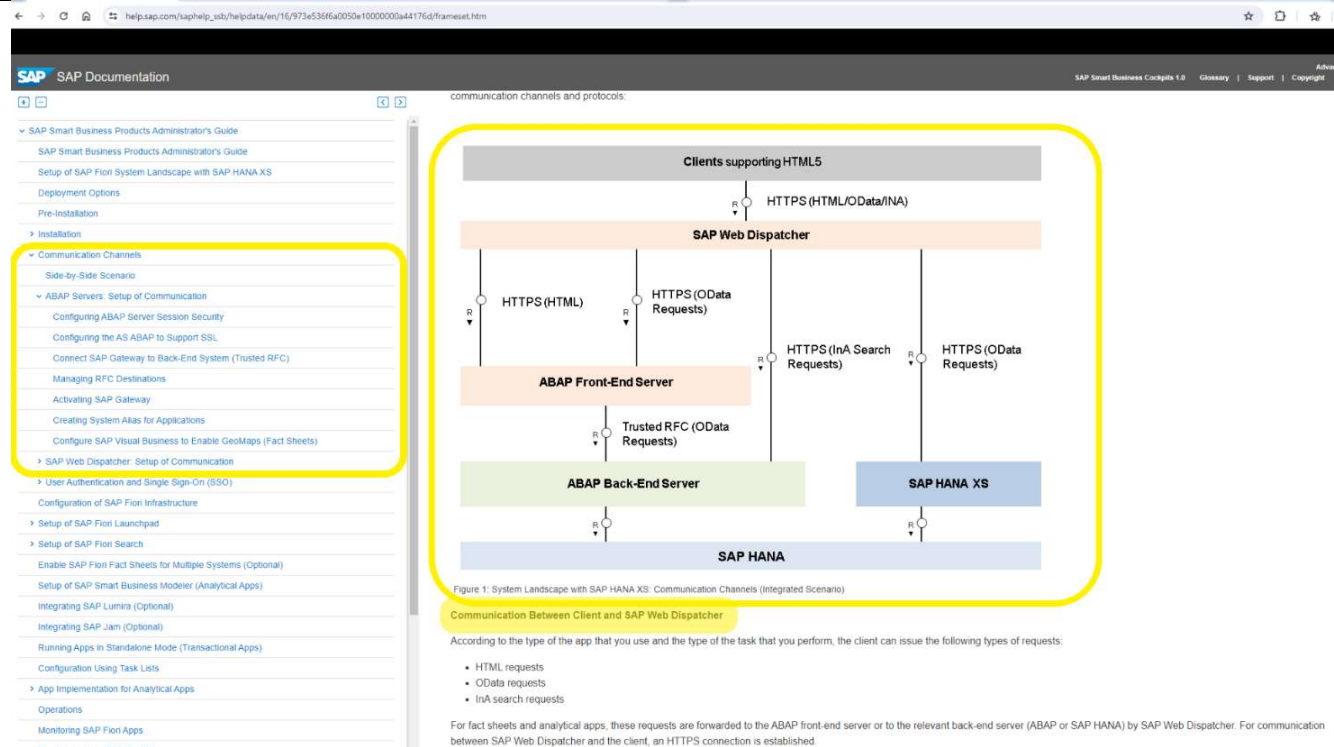
The Concept

SAP Fiori is the design language that brings great user experiences to enterprise applications based on SAP User Experience. It works seamlessly on desktops, tablets, and smartphones.

https://learning.sap.com/learning-journeys/learn-the-basics-of-sap-fiori/introducing-sap-fiori_c3915ced-ffd1-4127-a822-e217ff45fd72

The Accused Instrumentalities include software for communicating across a network. The excerpt below shows that “communication between the [user,] the front end, and the back end is established by using different communication channels and protocols” “[t]o transfer application data and security credentials within [the] SAP Fiori system landscape.”

See https://help.sap.com/saphelp_ssb/helpdata/en/16/973e536f6a0050e10000000a44176d/frameset.htm



See https://help.sap.com/saphelp_ssb/helpdata/en/16/973e536f6a0050e10000000a44176d/frameset.htm

help.sap.com/saphelp_ssb/helpdata/en/16/973e536f6a0050e10000000a44176d/frameset.htm

SAP Documentation

SAP Smart Business Cockpits 1.0 | Glossary | Support | Copyright | Disclaimer

Advanced Search

For communication between SAP Web Dispatcher and the ABAP servers, HTTPS connections are established.

Communication Between ABAP Front-End and ABAP Back-End Server

For transactional apps and fact sheets, data and services from the ABAP back-end server are provided to the ABAP front-end server by using OData services.

For communication between the ABAP front-end server and the ABAP back-end server, a trusted RFC connection is established.

Communication Between SAP Web Dispatcher and SAP HANA XS

For analytical apps, SAP Web Dispatcher forwards OData requests from the client to SAP HANA Extended Application Services (SAP HANA XS).

For communication between SAP Web Dispatcher and SAP HANA XS, an HTTPS connection is established.

Communication Between ABAP Back End and Map Provider

For fact sheets with integrated geographical maps, geographical coordinates and address data are transferred from the ABAP back-end server to the map provider using HTTP or HTTPS.

See https://help.sap.com/saphelp_ssb/helpdata/en/16/973e536f6a0050e10000000a44176d/frameset.htm

Furthermore, the Accused Instrumentalities require the use of a hardware communication interface to connect to the internet and communicate with other systems.

The Accused Instrumentalities include memory allocation in software, as well as hardware memory to store processor-executable instructions, as shown by the excerpt below:

SAP NW Installation Prerequisites

The minimum hardware requirements for SAP NetWeaver Gateway front-end server are as follows:

Requirements	Specification
Processor	Dual Core(2 logical CPUs) or higher, 2 GHz or higher
Random Access Memory (RAM)	8 GB or higher
Hard Disk Capacity	80 GB primary, or higher

Page 10 of SAP Fiori tutorialspoint (<https://pdfcoffee.com/sap-fiori-pdf-free.html>)

The Accused Instrumentalities include one processor that executes the software instructions and allows communication with the user display device, as shown by the excerpt below. The processor allows display and interaction with the secure user information.

SAP NW Installation Prerequisites

The minimum hardware requirements for SAP NetWeaver Gateway front-end server are as follows:

Requirements	Specification
Processor	Dual Core(2 logical CPUs) or higher, 2 GHz or higher
Random Access Memory (RAM)	8 GB or higher
Hard Disk Capacity	80 GB primary, or higher

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1(c). A) controlling the display device to display the desktop for the user platform as a channel grid framework including a matrix having a plurality of user-selectable items representing a corresponding plurality of authorized channels through which the user receives and/or interacts with respective portions of the secure user-centric information, and	The Accused Instrumentalities control the information on the software and hardware display for the user in SAP Fiori. This information is displayed as a matrix of tiles and links that can individually be selected to launch the corresponding apps on the Launchpad. As shown by the excerpts below, each of the tiles and links is a secure user-centric channel associated with an application, and that user's data can be sent to be displayed by the Accused Instrumentalities.

SAP Fiori Launchpad > My Home

Updated: April 17, 2023

SAP Fiori Launchpad “My Home”

Latest SAPUI5 Version 1.120

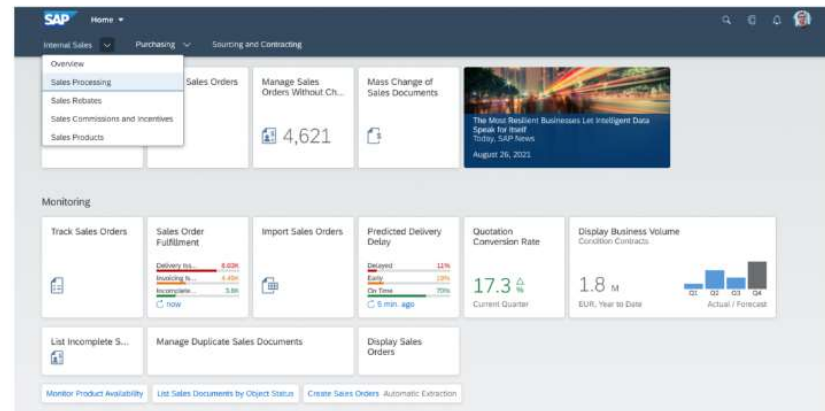
[Intro](#)
[Adding Apps to “My Home”](#)
[“My Home” Settings](#)
[Related Links](#)

Intro

The “My Home” space of the SAP Fiori launchpad leads to a personalized page for the user. It serves as an entry point to a personalized set of SAP Fiori apps on mobile and desktop devices. This article provides an overview of the SAP Fiori launchpad “My Home” page.

If activated, “My Home” is the first listed [space](#) on the [SAP Fiori launchpad](#) navigation bar.

The page contains [tiles](#), which are used to launch apps and can also show additional application information. As for other spaces on the SAP Fiori launchpad, users can personalize the home page by adding, removing, and grouping app tiles. Since the launchpad is role-based, only apps that are relevant for the user’s role profile are shown.



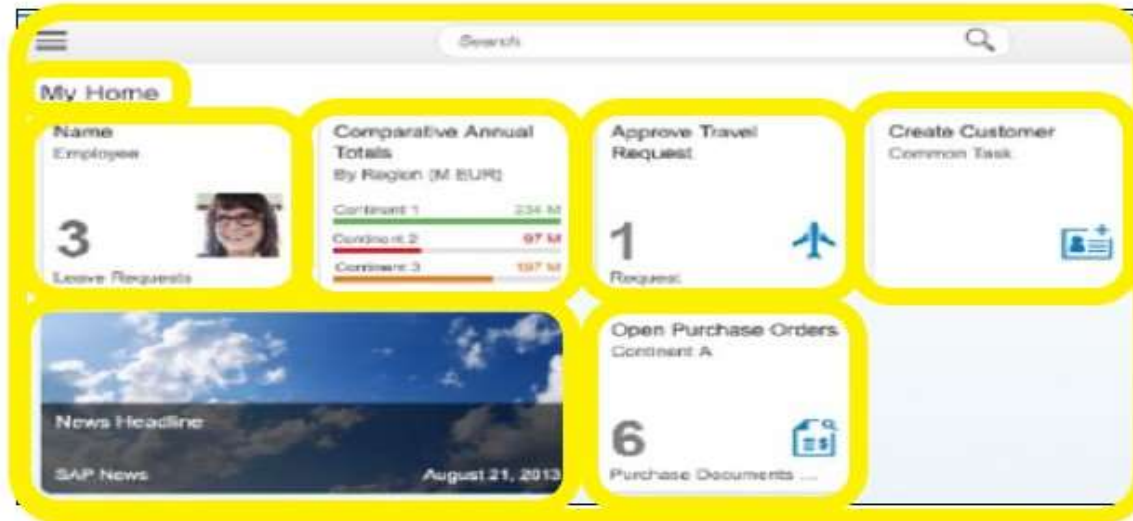
<https://experience.sap.com/fiori-design-web/sap-fiori-launchpad-my-home/>

See page 1 of SAP Fiori Launchpad “My Home” Updated on April 17, 2023
(<https://experience.sap.com/fiori-design-web/sap-fiori-launchpad-my-home/>).

SAP Fiori Launchpad- Key Facts

The key points about SAP Fiori Launchpad are given below.

- Web-based entry point to use SAP Business applications across platforms and devices.
- Delivered as an out-of-the-box thinking to the HTML client.
- High productivity for end users using features like theming, search integration, customization, etc.
- Offers single entry points for end users using multiple device types.



See page 23 of SAP Fiori tutorialspoint, pdfcoffee.com_sap-fiori-pdf-free.pdf.

SAP Fiori Launchpad Home Page

Latest SAPUI5 Version 1.120

[Intro](#) [Responsiveness](#) [Components](#) [Behavior and Interaction](#) [Resources](#)

Intro

Information

With SAPUI5 1.75, we introduced [SAP Fiori launchpad spaces](#) in parallel to the launchpad home page. You can now use the launchpad with either a home page or a space.

The **SAP Fiori launchpad home page** is the first page that users see after they have signed in. **It is the main entry point to SAP Fiori apps on mobile and desktop devices.**

The launchpad home page displays tiles and links that allow the user to launch apps, and may also show additional information. **The page can be personalized and apps can be added, removed, or bundled in groups.**

The SAP Fiori launchpad home page must be used for all SAP Fiori apps.

<https://experience.sap.com/fiori-design-web/home-page/>

See SAP Fiori Launchpad Home Page, Updated on April 17, 2023

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1(d). B) receiving configuration information from the user and transmitting the configuration information to at least one external computing device, wherein the configuration information is configured to cause the at least one external computing device to establish a user profile identifying user preferences, platform identities, and service support instructions that determine how the plurality of authorized channels behave on the user platform, wherein the at least one external computing device is configured to synchronize functions and features of one or more of the plurality	The Accused Instrumentalities receive and transmit configuration data indicating the user's preferences, platform identities (e.g., windows computer, apple computer, android mobile device, browsers, etc.) and service support instructions to an external computing device to set up the user's profile. The Accused Instrumentalities have instructions that specify how the secure user-centric channel behaves on any platform because the Accused Instrumentalities include code instructions allowing the user to have the same or personalized experience (such as the same design) across all the platforms he is using. The following excerpts show that the Accused Instrumentalities provide a seamless experience across the different platforms used by the user, based on his user profile (including their role in an organization, and user preferences etc.). The Accused Instrumentalities use computer instructions to determine operation. The following excerpt shows that configuration information is set for a user in one platform to allow a first usage and instantiation of the Accused Instrumentalities on a device and then a second instantiation of the Accused Instrumentalities on the same or another device.
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of channels across a plurality of user platforms by deploying secure user-centric information to the plurality of user platforms;

SAP Fiori Design Principles

There are five design principles for **SAP Fiori UI5**. These principles make SAP Fiori simple and decompose the different transactions into simple task based UI applications.

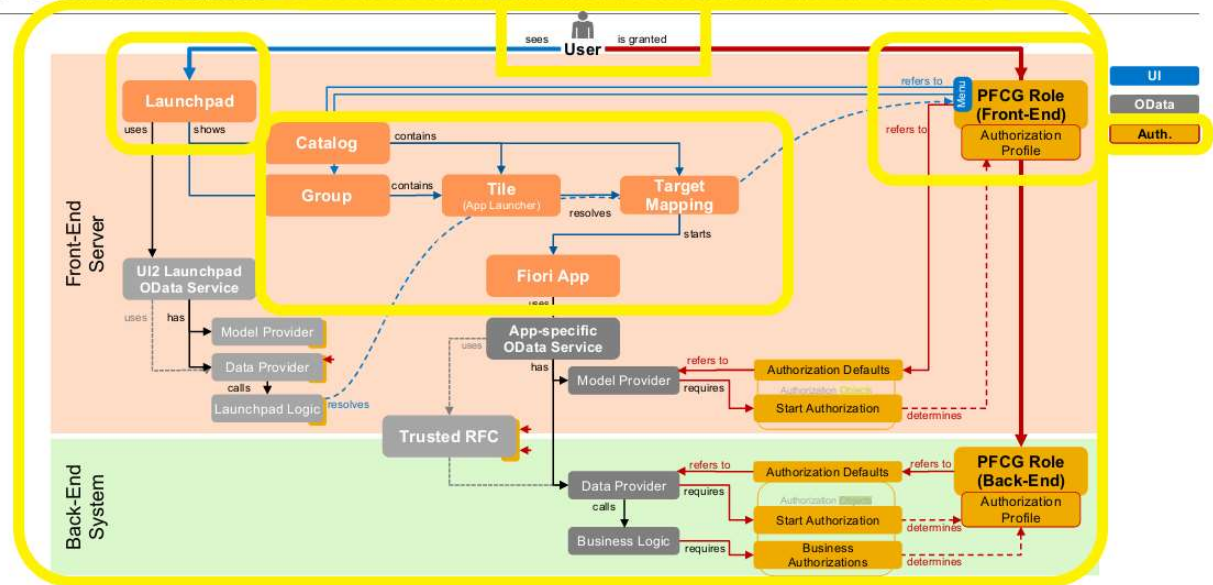
- **Role-Based** – SAP has decomposed various SAP transactions and changed them into beautiful user interactive applications that show only most relevant information to the users.
- **Responsiveness** – When SAP Fiori is combined with the power of SAP HANA, it provides an unmatched application response and query executions time.
- **Simple** – To make SAP Fiori simple to match the user demand, SAP has designed it as a **1-1-3** scenario. This means 1 user, 1 use case and 3 screens.
- **Seamless Experience** – SAP has provided all the Fiori apps based on the same language and it does not matter on the deployment and platform.
- **Delightful** – SAP Fiori was designed to work with **ECC 6.0** to make it easy for the users and to deploy on the existing SAP system.

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See page 2 of SAP Fiori tutorialspoint, pdfcoffee.com_sap-fiori-pdf-free.pdf.

SAP Fiori Architecture

SAP Fiori launchpad - User Assignment and Authorizations of Content



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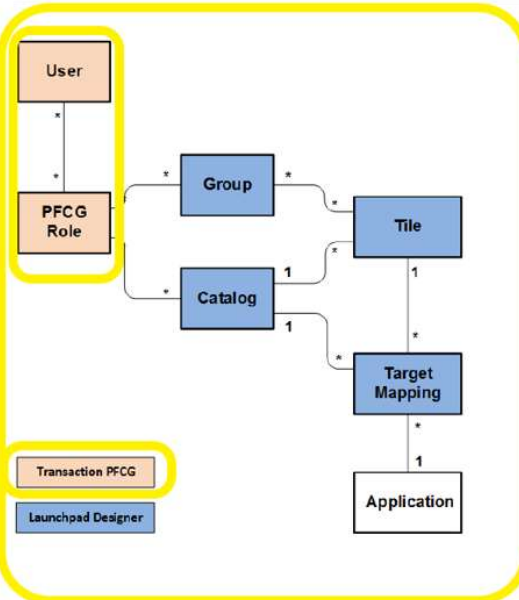
21

See page 21 of SAP Fiori User Experience – SAP S/4HANA Architecture Deep Dive, Version 4.1, August 2016,

https://kupdf.net/download/sap-fiori-ux-architecture-for-s4h_5908c09edc0d60825d959e7a_pdf

SAP Fiori Architecture

SAP Fiori launchpad - Content Model for ABAP platform



Transaction PFCG

- Assign groups and catalogs to roles
- Roles are the means to assign catalogs and their apps to users

SAP Fiori launchpad designer (FLPD)

Content can be configured system wide (configuration) or client specific (customizing):

- Target Mapping: maps navigation intent to concrete (logical application/target)
- Tile: used to launch an application from the homepage
- Catalog: set of applications a user can use and add to his homepage
- Group: predefined set of tiles a user sees on his homepage

See page 19 of SAP Fiori User Experience – SAP S/4HANA Architecture Deep Dive, Version 4.1, August 2016,

https://kupdf.net/download/sap-fiori-ux-architecture-for-s4h_5908c09edc0d60825d959e7a_pdf

SAP Fiori User Roles

Lines of Business

Finance  - Accounts Payable Accountant - Accounts Payable manager - Accounts Receivable Accountant - Accounts Receivable Manager - Cash Manager - Controller - G/L Accountant - Manager - Access Control Administrator - Financial Close Manager - Employee - Senior Executive	Human Resources  - Employee - Manager	Sales & Marketing  - Sales Representative (CRM/ SD) - Sales Manager - Internal Sales Representative (SD) - Marketing Manager - Marketing Executive - Marketing Expert - Contract Accounts Receivable Manager	Procurement  - Purchaser - Inventory Accountant - Employee - Manager - Strategic Purchaser	R&D, Engineering  - Project Manager & Planner - Program Manager - Project Team Member - Engineer
	Asset Management  - Maintenance Worker & Planner - EHS-Production Worker - EHS-Foreman		Supply Chain  - Supplier - Supply Planner - Supply Chain Analyst - Transportation Manager - Warehouse Manager - Shipping Specialist - Product Manager - Data Scientist - ATP Controller - Local Demand Planner	Manufacturing  - MRP Controller - Quality Engineer - Production Planner - Production Worker/Supervisor - Recipe Developer - Demand Planner

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Customer

6

See page 6 of SAP Fiori UX, App Overviews, December 2014,

https://experience.sap.com/files/SAPFiori_AppOverviews.pdf

SAP Fiori Architecture

SAP Web IDE - Key Use Cases



- Develop new SAP Fiori and SAPUI5 applications
- Extend SAP Fiori apps
- Develop SAPUI5 mobile hybrid applications (using Hybrid Application Toolkit plug-in)
- Extend the SAP Web IDE with new plug-ins and SAP Fiori Elements
- Seamlessly deploy to run on any device – automatic rendering for phone, tablet, desktop
- Deploy to SAP HANA Cloud Platform, SAP Mobile Platform or ABAP

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See page 46 of SAP Fiori User Experience – SAP S/4HANA Architecture Deep Dive, Version 4.1, August 2016,

https://kupdf.net/download/sap-fiori-ux-architecture-for-s4h_5908c09edc0d60825d959e7a_pdf

The following excerpt shows that use of roles for configuring a user experience and allowing movement between devices.

SAP Fiori provides all business roles in real time on compatible hand devices. It offers business roles on easy to use functions, simple with unmatched responsiveness on desktop, smartphones and Tablets.

SAP Fiori enables multiple device applications that allow users to start a process on their desktop/laptops and to continue that process on a smartphone or on a tablet. SAP has developed Fiori Apps based on User interface UI5.



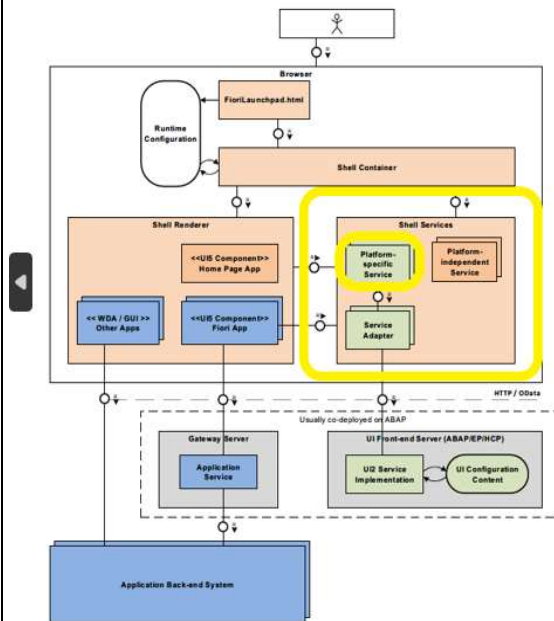
When SAP Fiori is combined with the power of the SAP HANA, it provides an unmatched application response and query-execution time. SAP Fiori user experience (UX) is used to provide a personalized and role-based user experience for enterprise-wide engagement across lines of business.

https://www.tutorialspoint.com/sap_fiori/sap_fiori_introduction.htm#:~:text=SAP%20Fiori%20enables%20multiple%20device,smartphone%20or%20on%20a%20tablet;

See also page 2 of SAP Fiori tutorialspoint, pdfcoffee.com_sap-fiori-pdf-free.pdf

SAP Fiori Architecture

SAP Fiori launchpad - Architecture



SAP Fiori launchpad is a runtime container supporting intent-based navigation for

- SAPUI5 Components
- Web Dynpro ABAP or SAP GUI apps
- External URLs

It provides **platform-independent** service APIs with adapters for different front-end servers (ABAP, SAP Enterprise Portal, SAP HANA Cloud Platform) and local consumption (Sandbox for testing in SAP Web IDE, mobile offline).

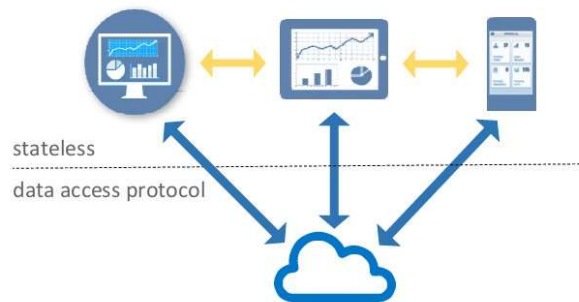
See page 18 of SAP Fiori User Experience – SAP S/4HANA – Version 4.1 – August 2016,

kupdf.net_sap-fiori-ux-architecture-for-s4h.pdf

The Accused Instrumentalities allow any data transmitted to any platform (including relating to any work done or changes made by the user) to be saved automatically, which also means that this data is accessible at any point in time on any external computing device used by the user.

SAP Fiori Architecture

UX Qualities



Modern, internet-educated User Experience

- Highly responsive
- Start now – save incomplete – continue later
- Keep working – data is saved automatically and asynchronously
- No data loss due to connectivity disruption or session time-out
- Start on one device – continue on other device
- Start now – let someone else continue later
- Collaborate now with others on same task/document
- Data is stored “in the cloud”

Consequence for Fiori Architecture

Data must be stored in a central location

- Not tied to device
- Not tied to session
- Not tied to user

See page 6 of SAP Fiori User Experience – SAP S/4HANA Architecture Deep Dive, Version 4.1, August 2016,

https://kupdf.net/download/sap-fiori-ux-architecture-for-s4h_5908c09edc0d60825d959e7a_pdf

Personalization Beyond the Launchpad

- **My Inbox and Fiori Elements:**

- Fiori Launchpad User Personalization extends to applications like My Inbox, allowing users to tailor their task lists and interfaces.
- Personalizing Fiori Elements ensures that applications provide a user-centric experience, aligning with specific needs.

- **Synchronization Across Devices:**

- Personalization settings are synchronized across devices, providing a consistent experience whether users are accessing Fiori from a desktop, tablet, or smartphone.
- This synchronization enhances mobility and flexibility in the modern workplace.

Conclusion: Empowering Users for a Productive Experience

SAP Fiori Launchpad User Personalization is a powerful tool that places the user in control of their Fiori experience. From rearranging tiles to setting defaults, choosing themes, and personalizing beyond the Launchpad, Fiori empowers users to tailor their digital workspace to align with their unique preferences and work requirements. In doing so, organizations can foster a more productive, engaging, and user-friendly environment, ultimately driving the success of Fiori implementations across diverse user bases. As organizations embrace the future of enterprise technology, SAP Fiori Launchpad User Personalization stands out as a key element in creating a digital workplace that truly revolves around the user.

Previous article

Unlocking Data Brilliance: A Deep Dive into SAP Fiori Elements for Embedded List Reports

Next article

Navigating the Data Horizon: Unveiling SAP Data Intelligence for Multi-Cloud Data Governance

See pages 2-3 of Personalizing Your SAP Fiori Experience: A Guide to Fiori Launchpad User Personalization, dated December 8, 2023, <https://technicalgyanguru.com/personalizing-your-sap-fiori-experience-a-guide-to-fiori-launchpad-user-personalization/>.

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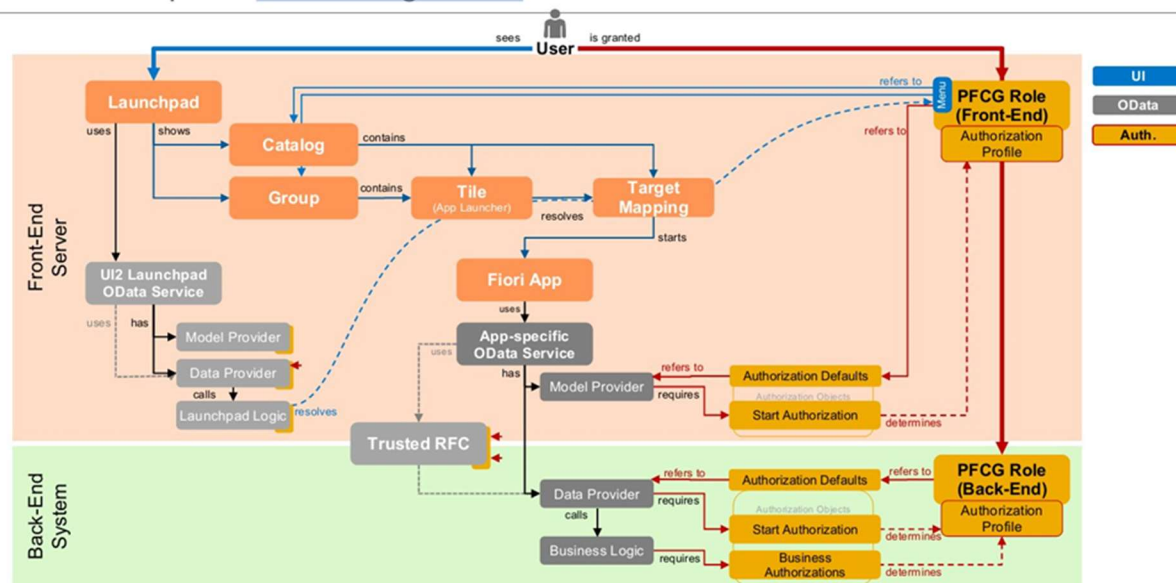
1(e). wherein at least a portion of the user-centric information provided to the user through the plurality of authorized channels is based at least in part on information access rights and/or security protocols respectively associated with the corresponding plurality of authorized channels, the user, and the user platform, and wherein at least a portion of the user-centric information provided to the user through the plurality of authorized channels is based at least in part on the user profile and is provided to the user without being requested by the user; and

The information transmitted to the user via the application is based on the access rights provided to the user corresponding to the user identity and platform identity, as shown by the excerpts below. The information transmitted for the applications in the Accused Instrumentalities is based on the user's profile information and automatically generated when the user logs into the system.

The following excerpt of the SAP Fiori Architecture shows how the Accused Instrumentalities will provide a user centric information .

SAP Fiori Architecture

SAP Fiori launchpad - User Assignment and Authorizations of Content



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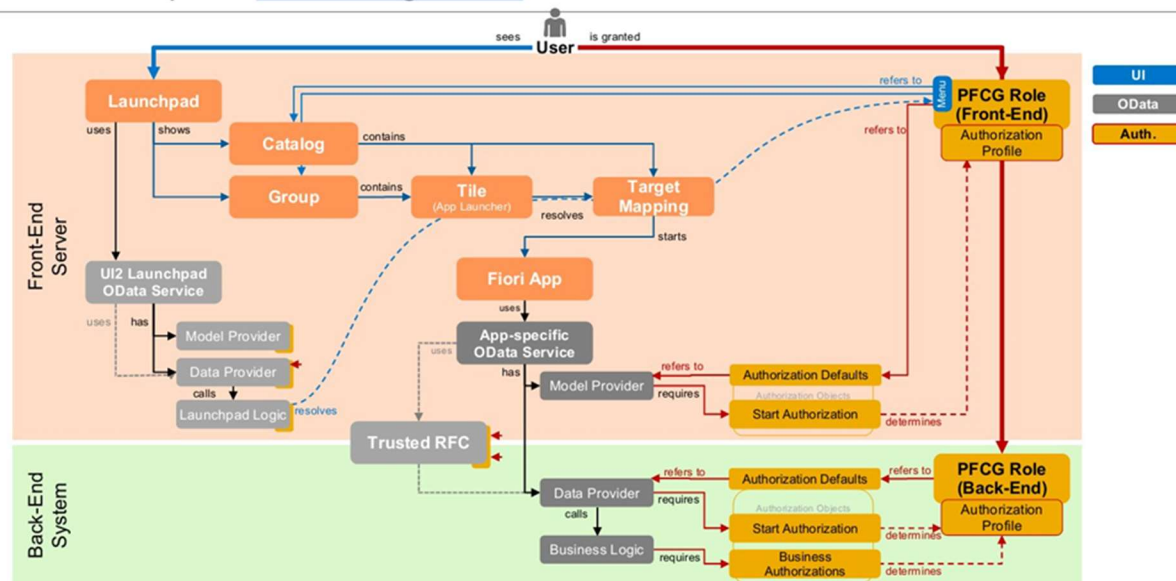
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See page 21 of SAP Fiori User Experience – SAP S/4HANA – Version 4.1 – August 2016, [kupdf.net_sap-fiori-ux-architecture-for-s4h.pdf](https://www.kupdf.net/sap-fiori-ux-architecture-for-s4h.pdf).

The user will have therefore access to all relevant information via the application(s) through SAP Fiori without having to submit any requests; such information is provided according to the user's access rights corresponding to the user identity and platform identity.

SAP Fiori Architecture

SAP Fiori launchpad - User Assignment and Authorizations of Content



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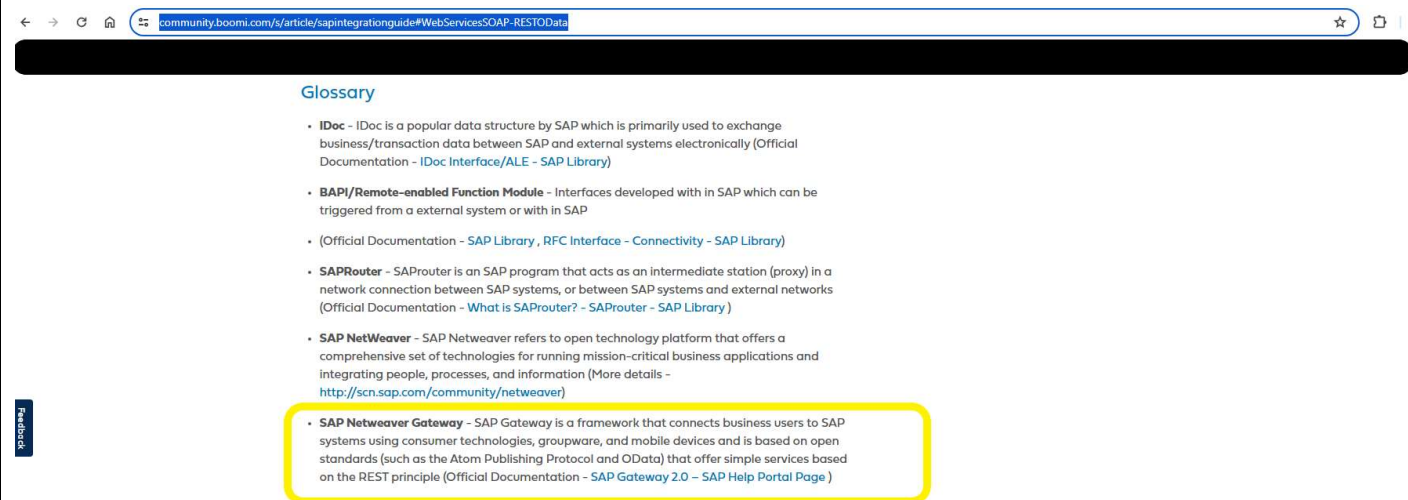
See page 21 of SAP Fiori User Experience – SAP S/4HANA – Version 4.1 – August 2016, [kupdf.net_sap-fiori-ux-architecture-for-s4h.pdf](https://www.kupdf.net/sap-fiori-ux-architecture-for-s4h.pdf).

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1(f). wherein at least a portion of the secure user-centric information provided to the user through the plurality of authorized channels is received based in part on a bi-directional interrogation of one or more of the plurality of authorized channels, wherein the bi-directional interrogation comprises the one or more of the plurality of authorized channels interrogating an identity management server, and

The Accused Instrumentalities receive relevant user information via applications accessible to the users through SAP Fiori is based in part on an exchange of queries of the authorized apps. The exchange of queries involves components used by the authorized app(s) interrogating the identity management server (which manages and control the user's identity and access privileges) and a web service gateway (which manages and facilitates communication between the user and backend services) interrogating the authorized app(s), wherein the web services gateway is a tool through which the channel grid framework or the Launchpad interacts with the identity management server. The Accused Products include applications that can bidirectionally interrogate the identity management server that determines what and if the user centric information should be sent. The identity management server can be any component used to establish the identity of the user.

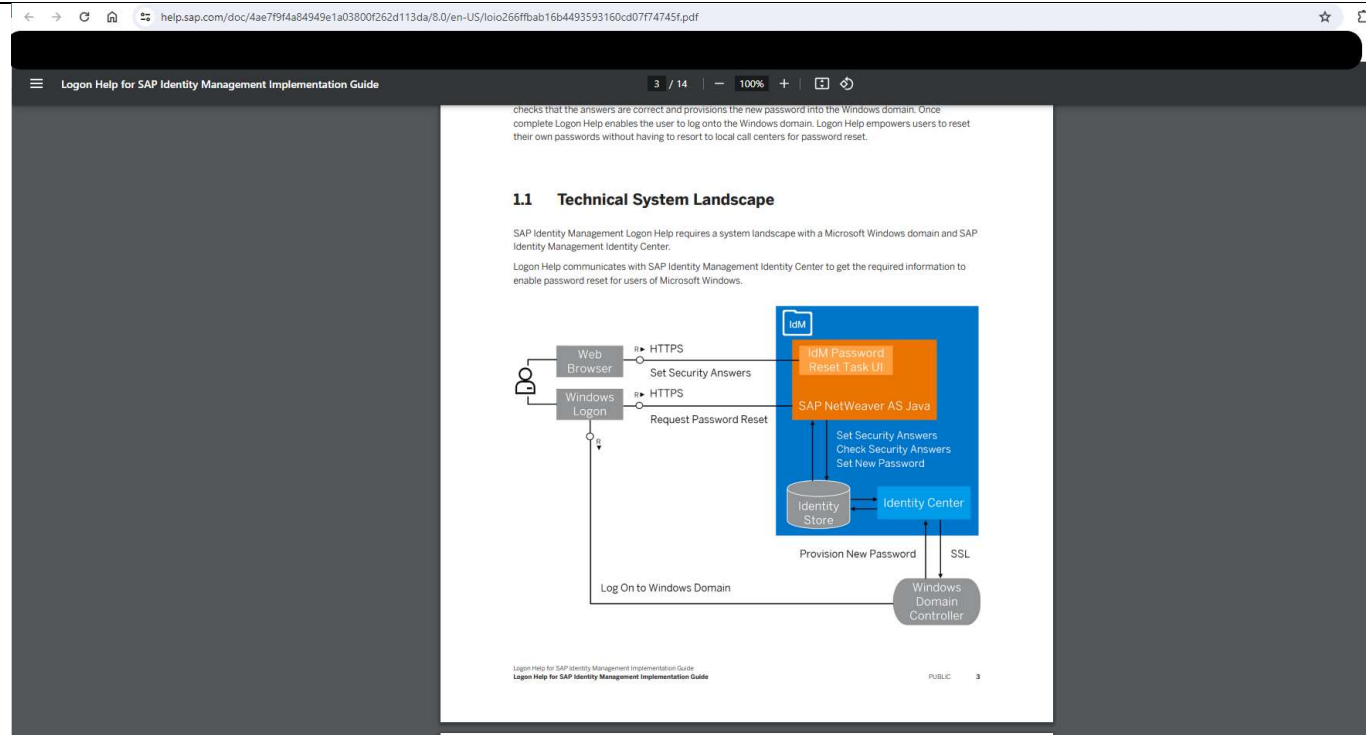
The following excerpt shows that "SAP Netweaver Gateway" is an example web services gateway, which facilitates communication between users and SAP systems.



<https://community.boomi.com/s/article/sapintegrationguide#WebServicesSOAP-RESTOData>

The excerpt below shows the use of the "SAP Identity Management Identity Center."

wherein the bi-directional interrogation further comprises the identity management server and a web services gateway interrogating the one or more of the plurality of authorized channels, wherein the web services gateway is a tool through which the channel grid framework interacts with the identity management server.



<https://help.sap.com/doc/4ae7f9f4a84949e1a03800f262d113da/8.0/en-US/loio266ffbab16b4493593160cd07f74745f.pdf>

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**'641 Patent
Claim 2**

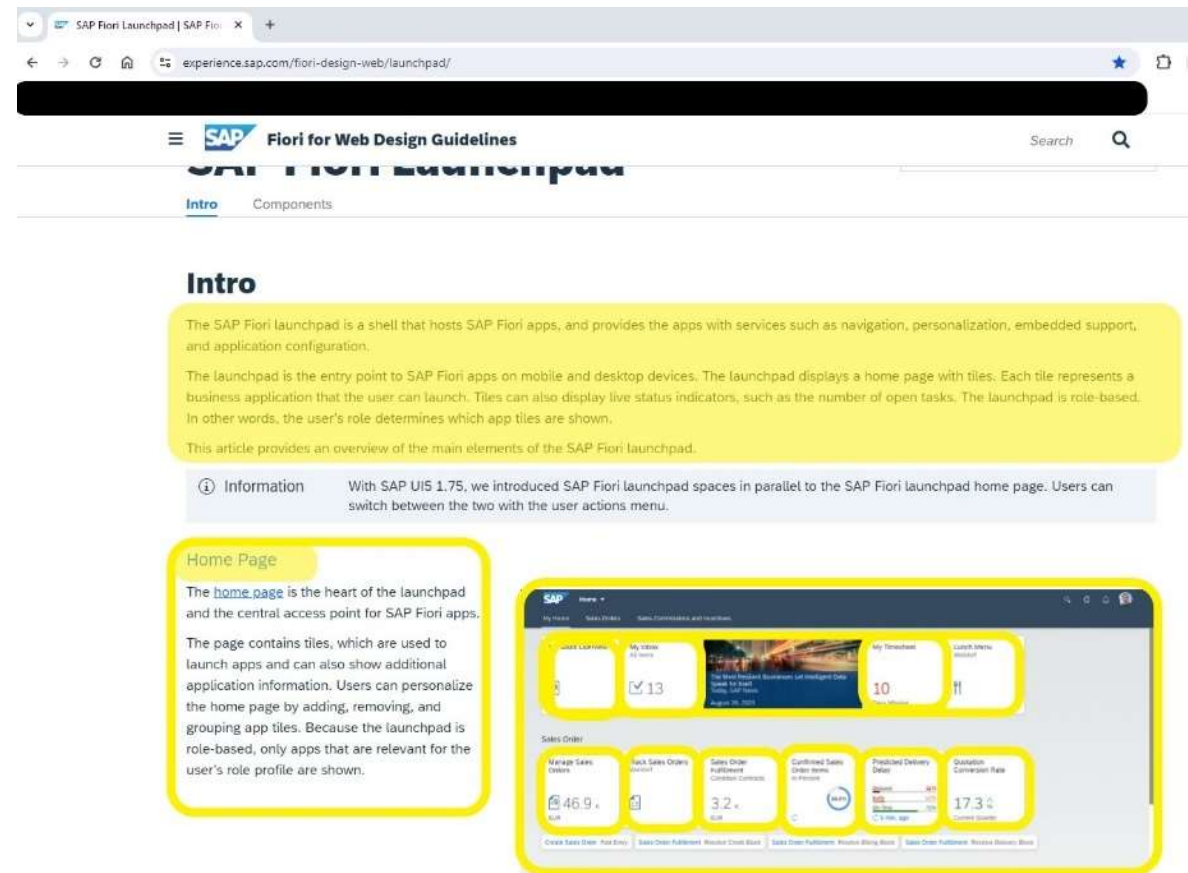
2(a). The apparatus of claim 1, wherein:

See Claim 1.

the plurality of authorized channels includes at least a first authorized channel through which the user receives and/ or interacts with first authenticated channel information constituting a first portion of the secure user-centric information;

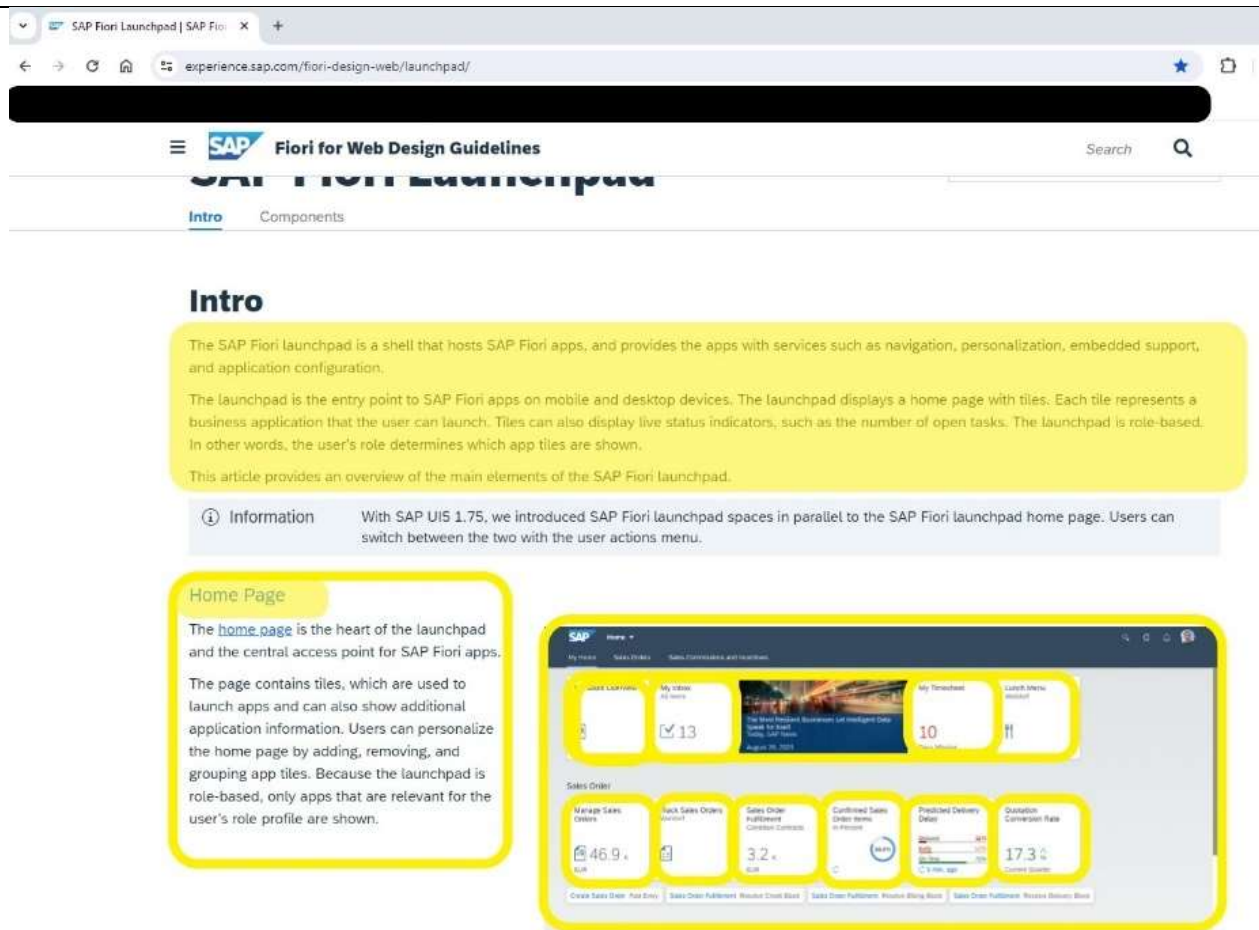
The Accused Instrumentalities include software to display SAP Fiori with application tiles on any device used by the user. “Each tile represents a business application that the user can launch.” See <https://experience.sap.com/fiori-design-web/launchpad/>.

Further, as shown by the excerpt below, SAP Fiori is a matrix of tiles and links that display and launch the corresponding apps on the Launchpad. Each of the links is a secure user-centric channel associated with an app, and that user’s data can be sent to be displayed, and the user can interact with it.



<https://experience.sap.com/fiori-design-web/launchpad/>

	As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.
2(b). the first authenticated channel information is provided by at least one authenticated channel application and/or at least one authenticated service; and	See Claim 1. The Accused Instrumentalities include SAP Fiori, which allows users to access the applications on different platforms. The user will have therefore access to all relevant information or services via the application(s), and such information is provided according to the user's authorized application(s), and access rights. Further, as shown by the excerpt below, SAP Fiori is a matrix of tiles and links that display and launch the corresponding apps on the Launchpad. Each of the links is a secure user-centric channel associated with an app, and that user's data can be sent to be displayed, and the user can interact with it.

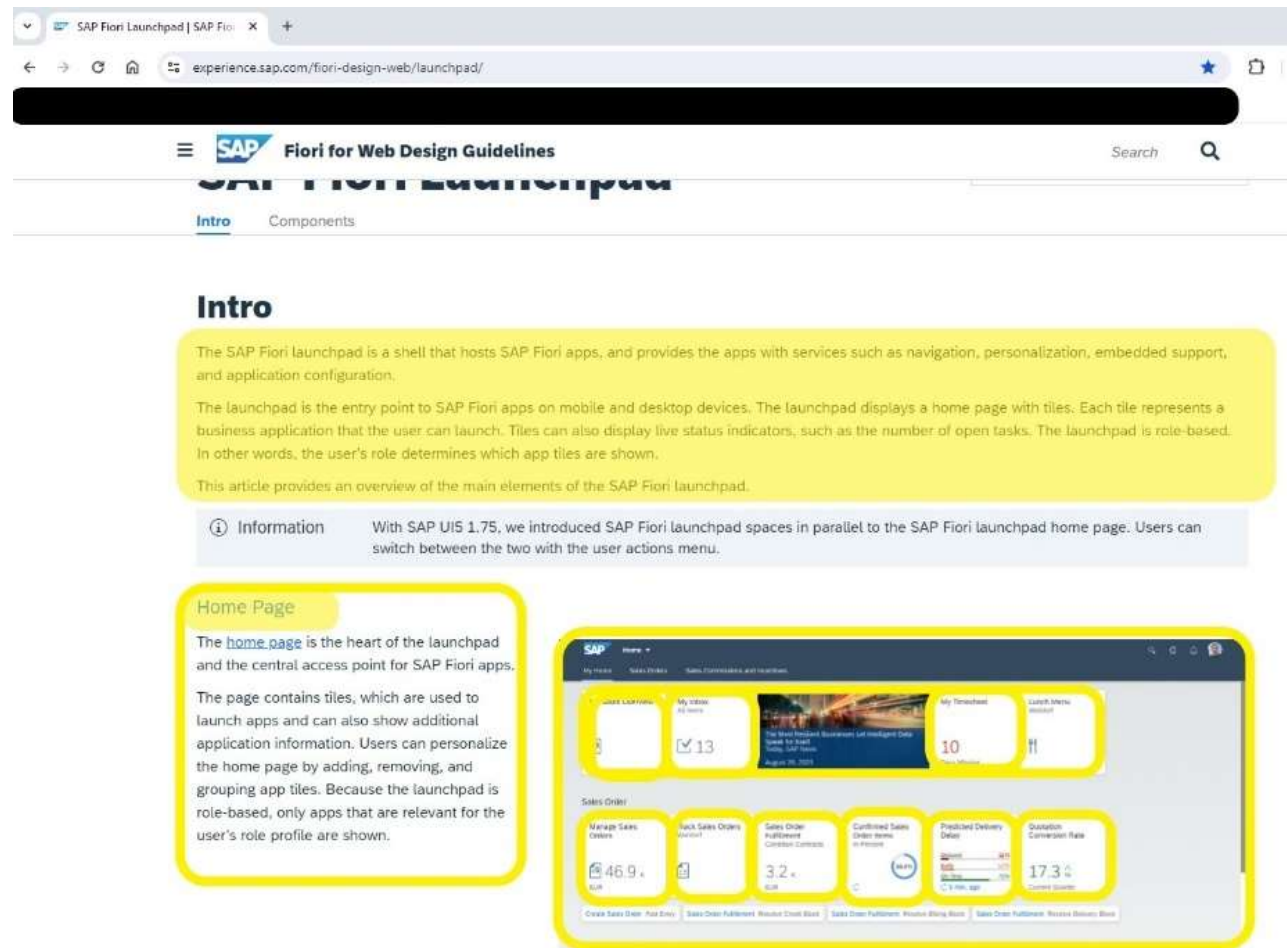


<https://experience.sap.com/fiori-design-web/launchpad/>

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.

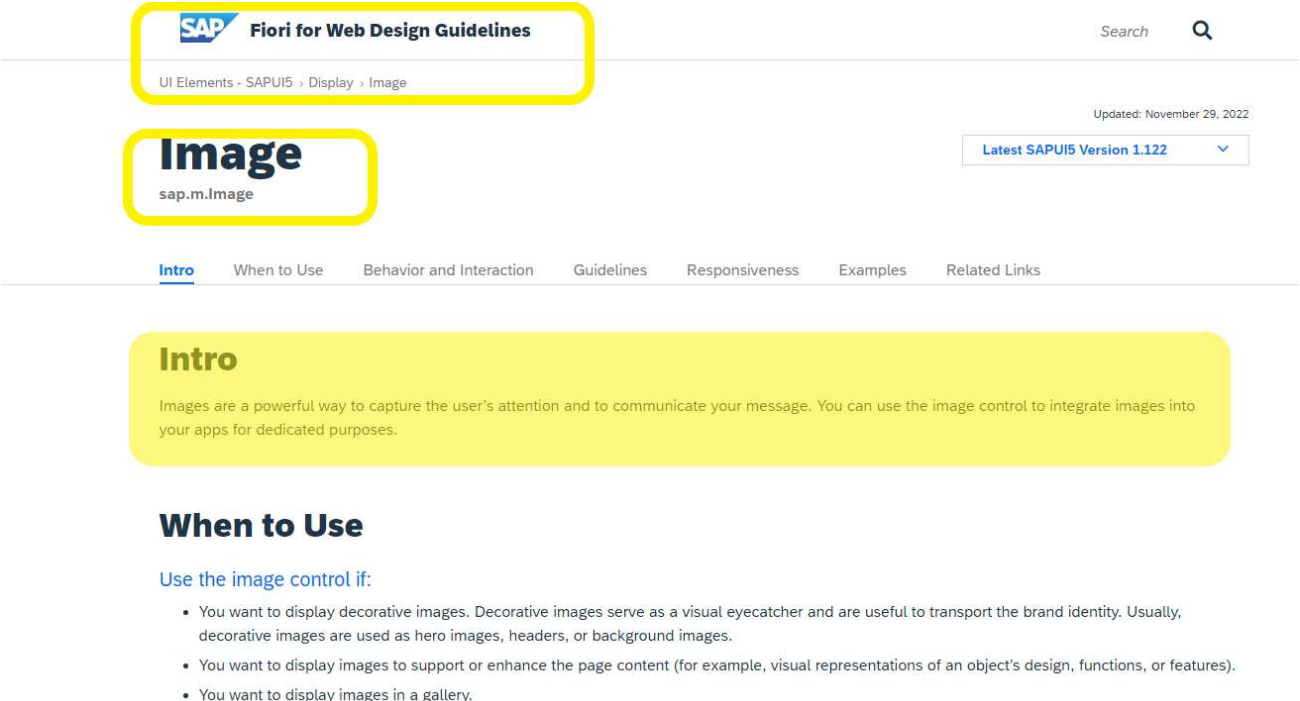
2(c). the plurality of user-selectable items displayed in A) includes at least a first user-selectable item representing the first authorized channel.

Further, as shown by the excerpt below, SAP Fiori is a matrix of tiles and links that display and launch the corresponding apps on the Launchpad. Each of the links is a secure user-centric channel associated with an app, and that user's data can be sent to be displayed, and the user can interact with it.



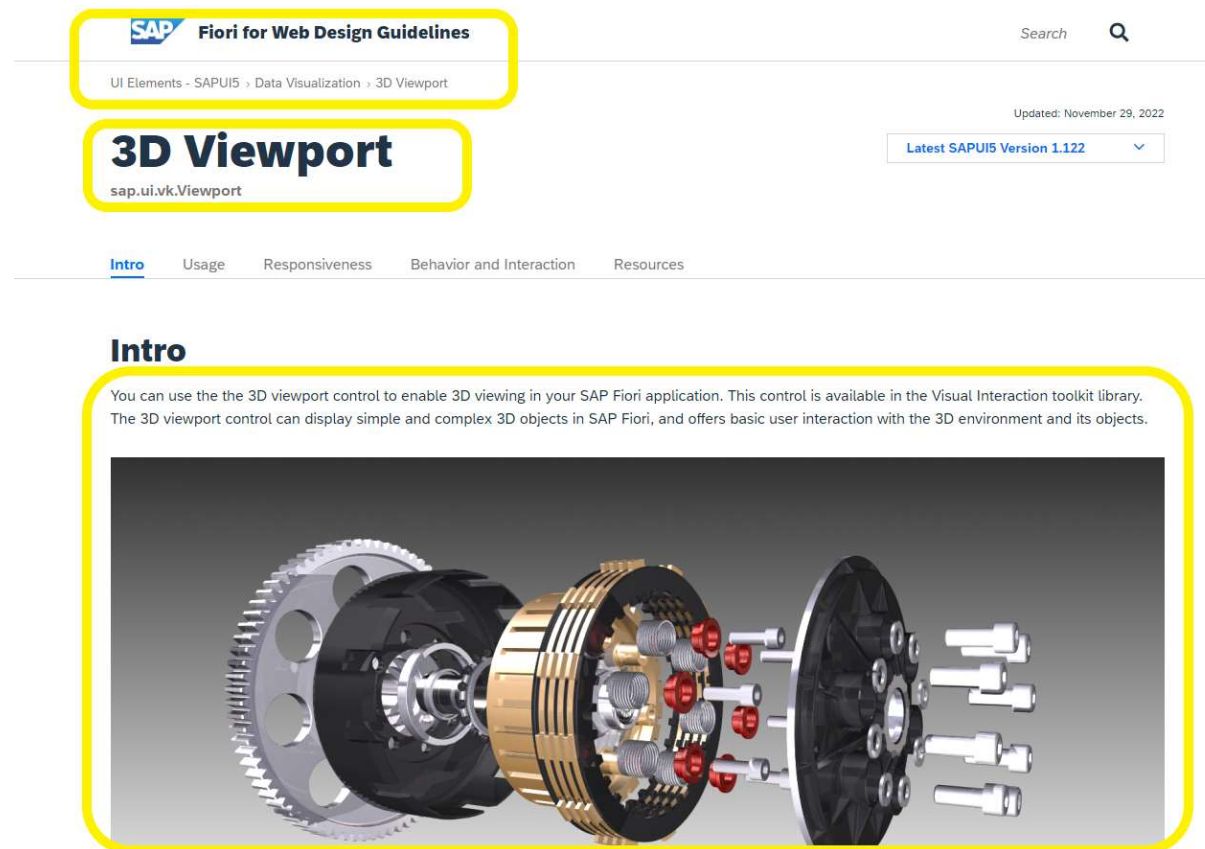
<https://experience.sap.com/fiori-design-web/launchpad/>

	As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.
'641 Patent Claim 3	
3. The apparatus of claim 1, wherein the user platform includes at least one of: - a desktop computer; - a laptop computer; - a tablet computer; - a net-book computing device; - a handheld computing device; - a personal, enterprise, or portable digital assistant; - a telecommunications device including one of a telephone, a cell phone, and a smart phone; - a personal navigation device; - a vehicle-based device;	See Claim 1. The excerpt below shows examples of different devices using different applications through the Accused Instrumentalities. See page 2 of SAP Fiori tutorialspoint, https://pdfcoffee.com/sap-fiori-pdf-free.html. As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.

an optical disk player; a television; and a game console.	
‘641 Patent Claim 4	
4. The apparatus of claim 1, wherein the secure user-centric information includes at least one of: text information; graphic information; one or more pictures; one or more videos; audio or digital sound; streaming data, audio or video; content associated with an executing computer application; voice-over-IP communication; instant messaging/SMS information; video-conferencing information;	See Claim 1. Further, the secure user-centric information can be displayed in various ways and different format, including in text information, and images. The excerpts below are examples of the features that SAP Fiori offers to users. 

environmental
monitoring
information;
financial services
information;
enterprise resource
planning
information;
enterprise content
management
information;
building
information;
project management
information;
product lifecycle
management
information;
RSS (Really Simple
Syndication) reader
information;
remote device
control/interaction
information;
a three-dimensional
graphic visualization
of one or more
objects and/or
immersive
environments;
one or more word
processing
documents;

<https://experience.sap.com/fiori-design-web/image/>



<https://experience.sap.com/fiori-design-web/3d-viewport/>

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

one or more spreadsheets; one or more presentation/slide shows; email; and address book information.	
'641 Patent Claim 5	
5. The apparatus of claim 1, wherein the at least one communication interface includes a web services gateway communicatively coupled to the at least one external computing device via the one or more transmission media.	See Claim 1. The transmission of the relevant information via the app accessible to the user through Accused Instrumentalities is based on a communication interface that includes a web service gateway (which manages and facilitates communication between systems), which connects and communicates with any of the user's device. The excerpts below show that the Accused Instrumentalities include a web services gateway.

Glossary

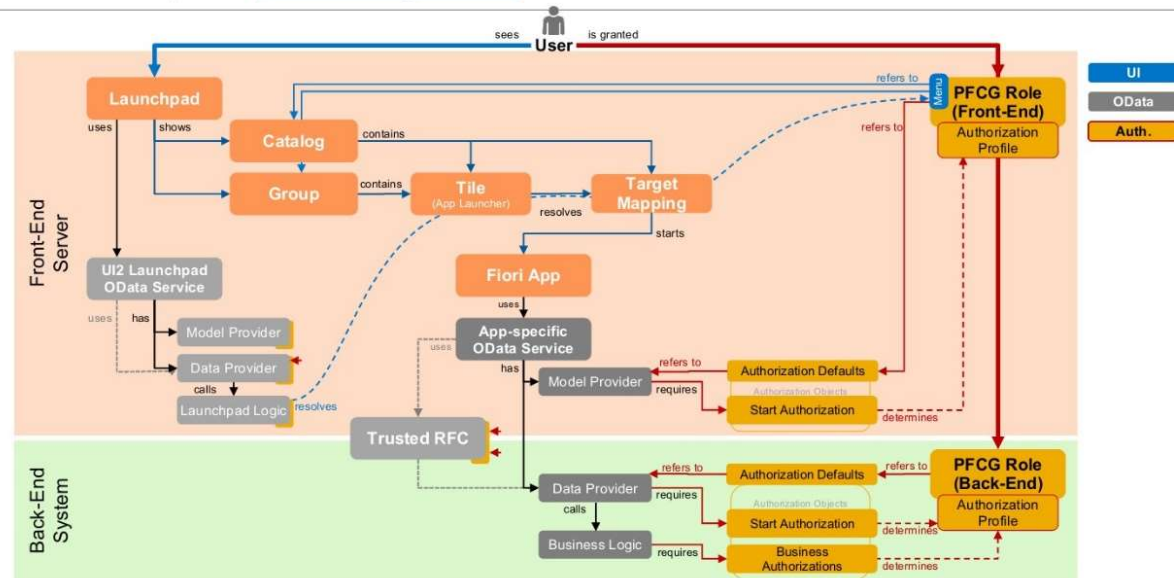
- **IDoc** - IDoc is a popular data structure by SAP which is primarily used to exchange business/transaction data between SAP and external systems electronically (Official Documentation - [IDoc Interface/ALE](#) - [SAP Library](#))
- **BAPI/Remote-enabled Function Module** - Interfaces developed with in SAP which can be triggered from a external system or with in SAP
- (Official Documentation - [SAP Library](#) , [RFC Interface](#) - [Connectivity](#) - [SAP Library](#))
- **SAPRouter** - SAProuter is an SAP program that acts as an intermediate station (proxy) in a network connection between SAP systems, or between SAP systems and external networks (Official Documentation - [What is SAProuter?](#) - [SAProuter](#) - [SAP Library](#))
- **SAP NetWeaver** - SAP Netweaver refers to open technology platform that offers a comprehensive set of technologies for running mission-critical business applications and integrating people, processes, and information (More details - <http://scn.sap.com/community/netweaver>)
- **SAP Netweaver Gateway** - SAP Gateway is a framework that connects business users to SAP systems using consumer technologies, groupware, and mobile devices and is based on open standards (such as the Atom Publishing Protocol and OData) that offer simple services based on the REST principle (Official Documentation - [SAP Gateway 2.0](#) - [SAP Help Portal Page](#))

<https://community.boomi.com/s/article/sapintegrationguide#WebServicesSOAP-RESTOData>

The excerpts below show the architecture of SAP Fiori, which allows the app(s) to provide secure information to the user, including the presence of a database.

SAP Fiori Architecture

SAP Fiori launchpad - User Assignment and Authorizations of Content



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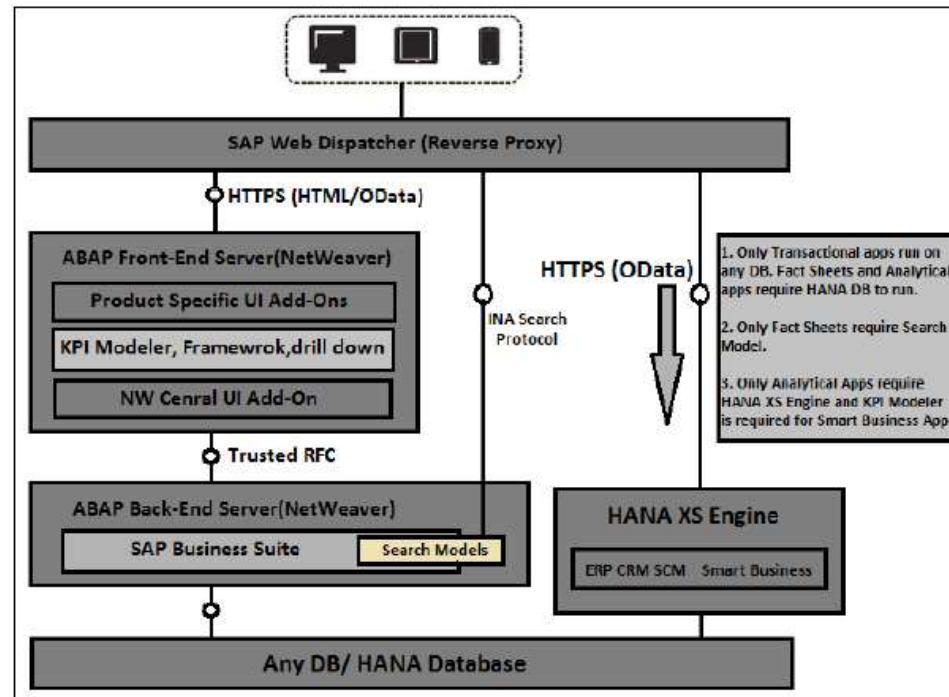
This presentation and SAP's strategy and possible future developments are subject to change and may be changed by SAP at any time for any reason without notice. This document is provided without a warranty of any kind, either express or implied, including but not limited to, the implied warranties of merchantability, fitness for a particular purpose, or non-infringement.

Public

21

See page 21 of SAP Fiori User Experience – SAP S/4HANA – Version 4.1 – August 2016,

https://kupdf.net/download/sap-fiori-ux-architecture-for-s4h_5908c09edc0d60825d959e7a_pdf.



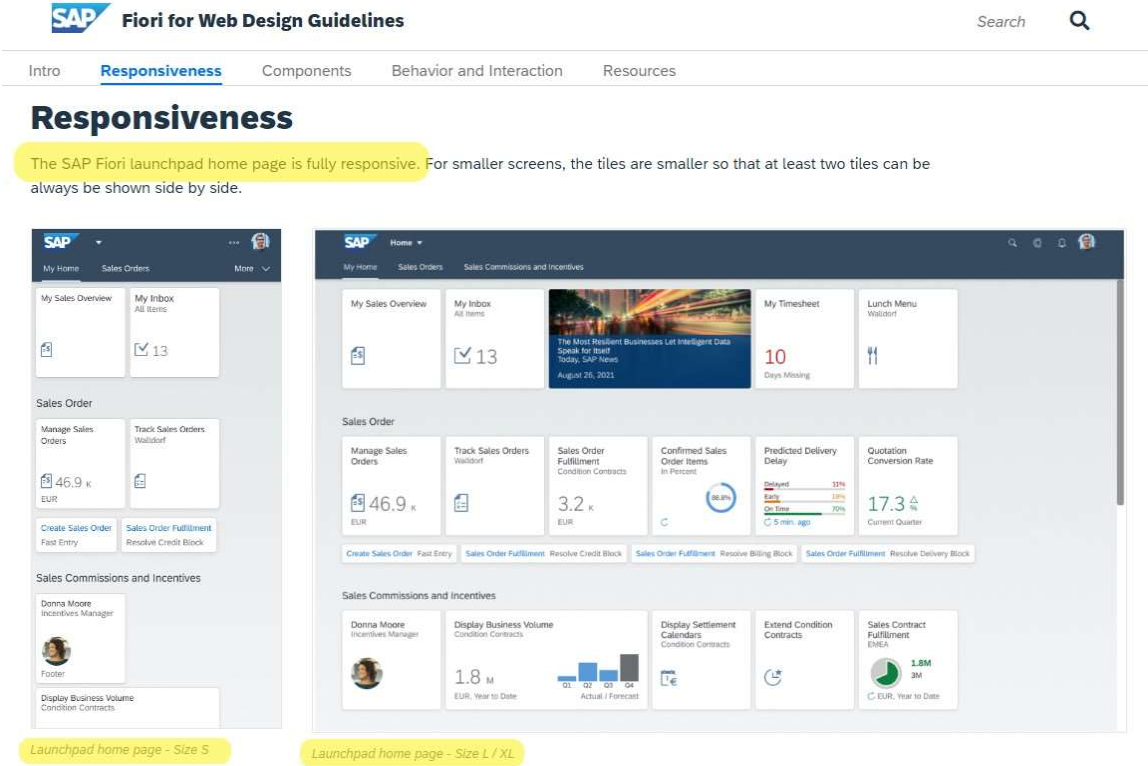
Fact Sheets require Search models to perform search capability in Fiori Apps. Fact sheets are used to drill the key information and contextual information in business operations. In SAP Fiori tiles, you can drill down to further details. It also allows you to navigate from one fact sheets to all its related fact sheets.

Analytical apps and Smart Business apps data come from HANA database through HANA XS Engine.

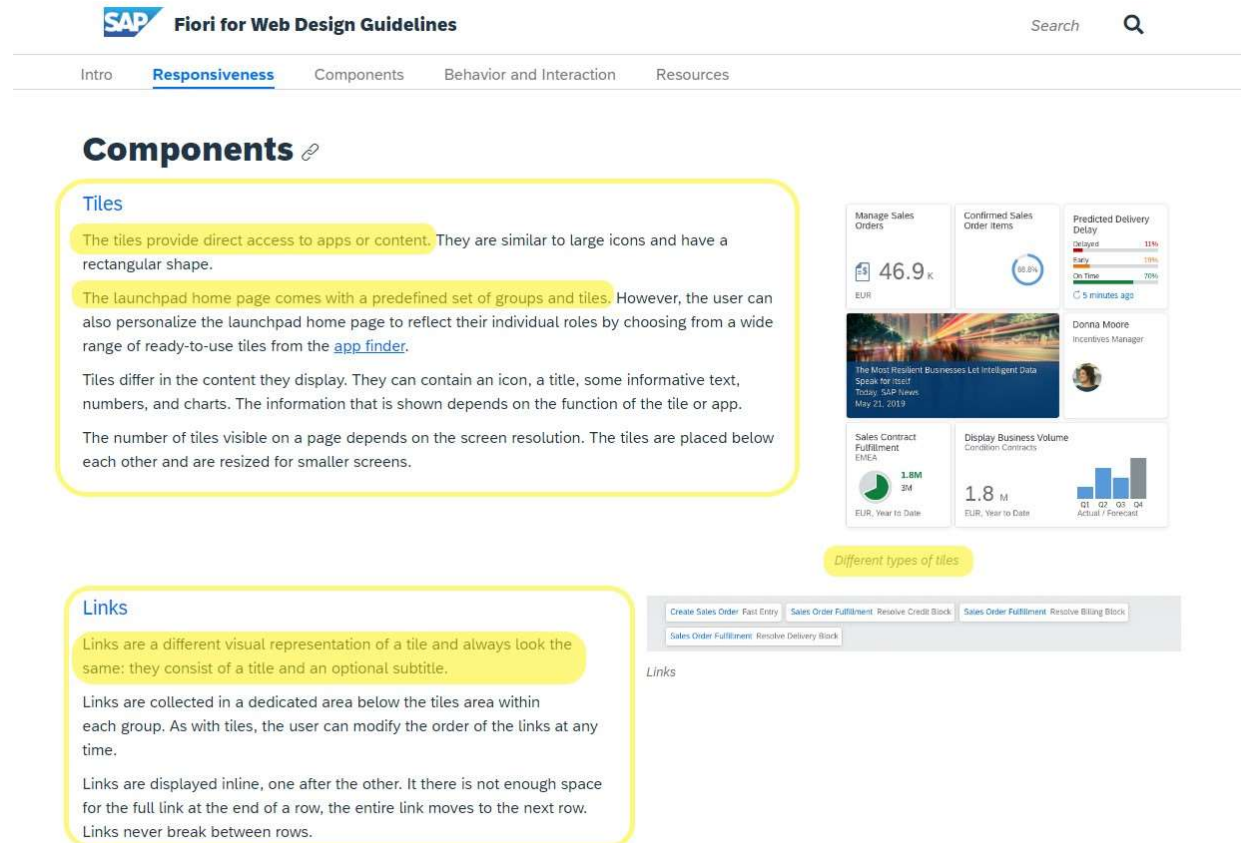
HANA Live content contains Virtual Data Model reuse content, which can be used for extensibility purpose.

The user places request via Web browser using HTTPS. Trusted RFC is used to communicate between ABAP Front-End and Back-End server.

See page 9 of SAP Fiori tutorialspoint, pdfcoffee.com_sap-fiori-pdf-free.pdf

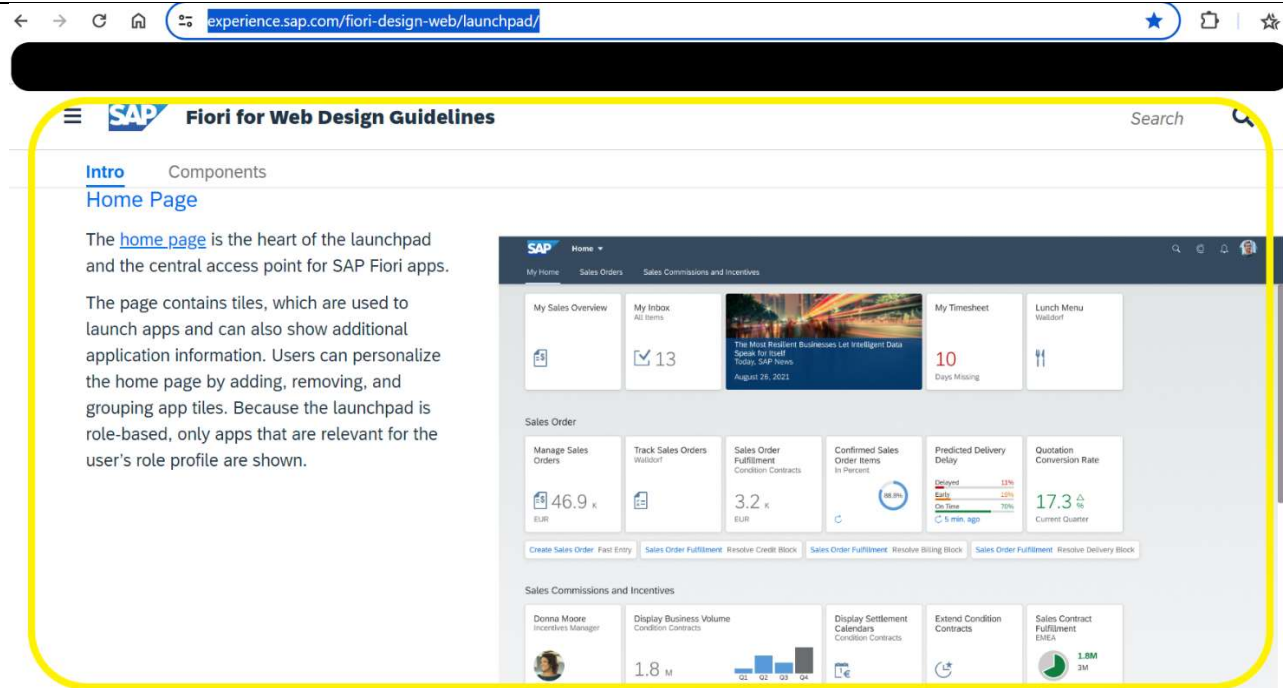
	As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.
'641 Patent Claim 6	
6. The apparatus of claim 1, wherein the channel grid framework includes a two-dimensional array of the users selectable items.	See Claim 1. The tiles in the Accused Instrumentalities are contained in a matrix in the channel grid framework. As shown below, these tiles display information and are selectable items specific to the user. 

See pages 1-2 of SAP Fiori Launchpad Home Page, Updated on April 17, 2023,
<https://experience.sap.com/fiori-design-web/home-page/>.



See pages 2-3 of SAP Fiori Launchpad Home Page, Updated on April 17, 2023,
<https://experience.sap.com/fiori-design-web/home-page/>.

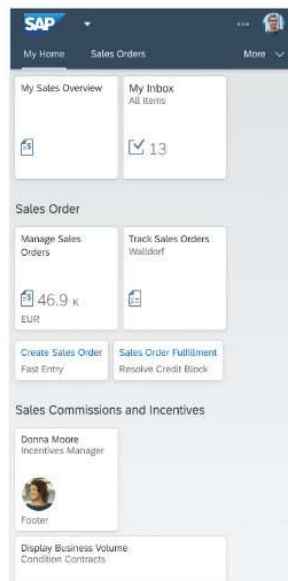
	As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.
'641 Patent Claim 7	
7. The apparatus of claim 1, wherein the channel grid framework occupies a majority of the desktop.	See Claim 1. Further, the SAP Fiori "home page is the heart of the launchpad and the central access point for SAP Fiori apps." The page contains tiles, which are used to launch apps and can also show additional application information." https://experience.sap.com/fiori-design-web/launchpad/ The excerpts below demonstrate that the user can be provided information via the apps to any platform. As shown, there is a matrix of elements or tiles each representing an application that provides the user with access to the information in the application.



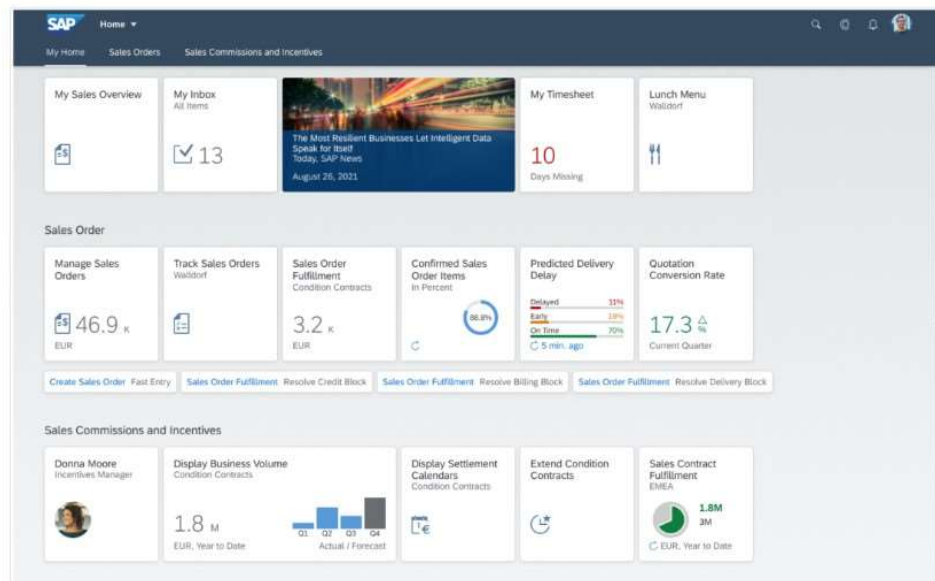
<https://experience.sap.com/fiori-design-web/launchpad/>

Responsiveness

The SAP Fiori launchpad home page is fully responsive. For smaller screens, the tiles are smaller so that at least two tiles can be always be shown side by side.



Launchpad home page - Size S



Launchpad home page - Size L / XL

See pages 1-2 of SAP Fiori Launchpad Home Page, Updated on April 17, 2023,

<https://experience.sap.com/fiori-design-web/home-page/>.

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.

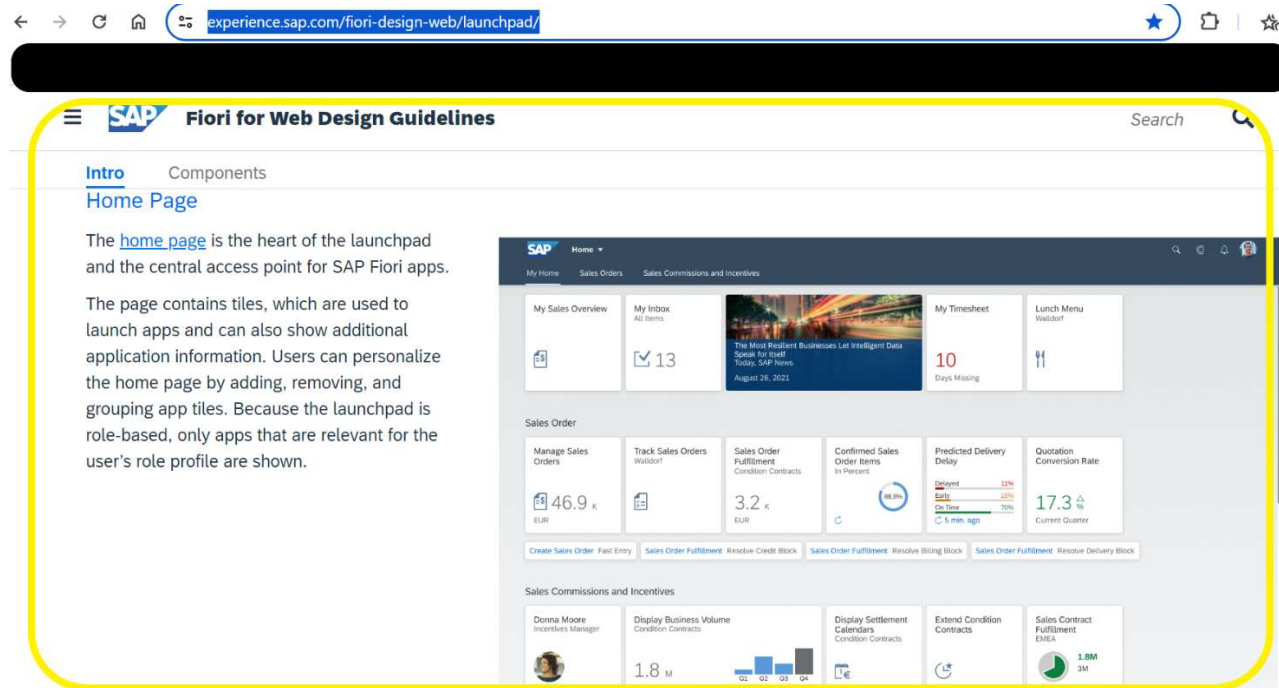
**'641 Patent
Claim 8**

8. The apparatus of claim 1, wherein the channel grid framework includes a twelve-item grid of the user-selectable items.

See Claim 1.

Further, the tiles in the Accused Instrumentalities are contained in a matrix in the channel grid framework.

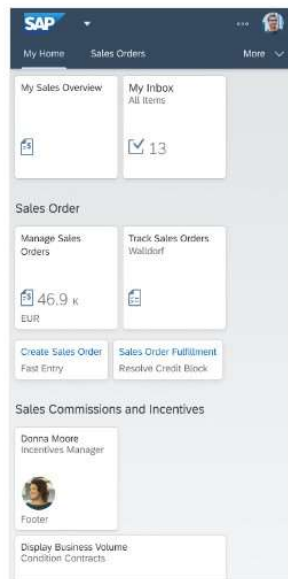
As shown below, the twelve tiles display information and are selectable items specific to the user.



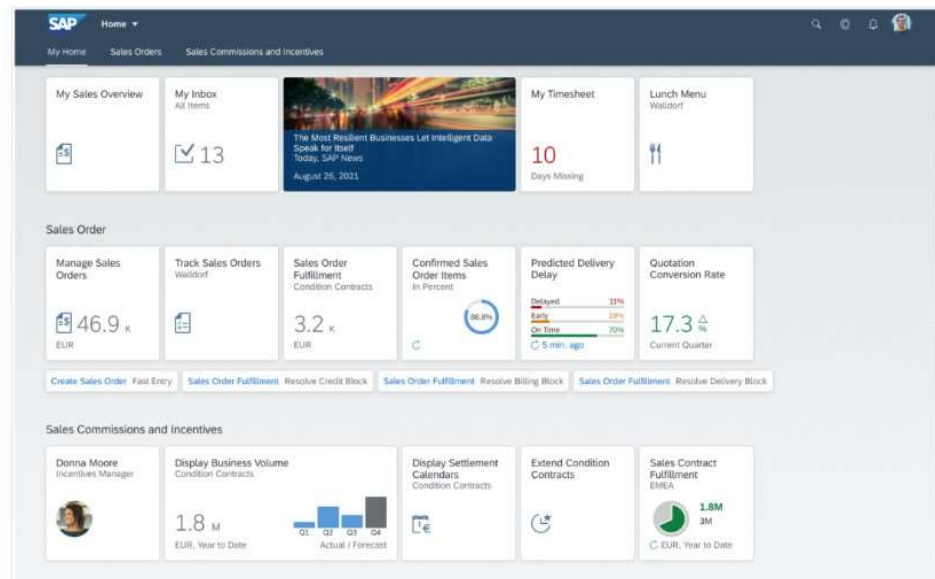
<https://experience.sap.com/fiori-design-web/launchpad/>

Responsiveness

The SAP Fiori launchpad home page is fully responsive. For smaller screens, the tiles are smaller so that at least two tiles can be always be shown side by side.



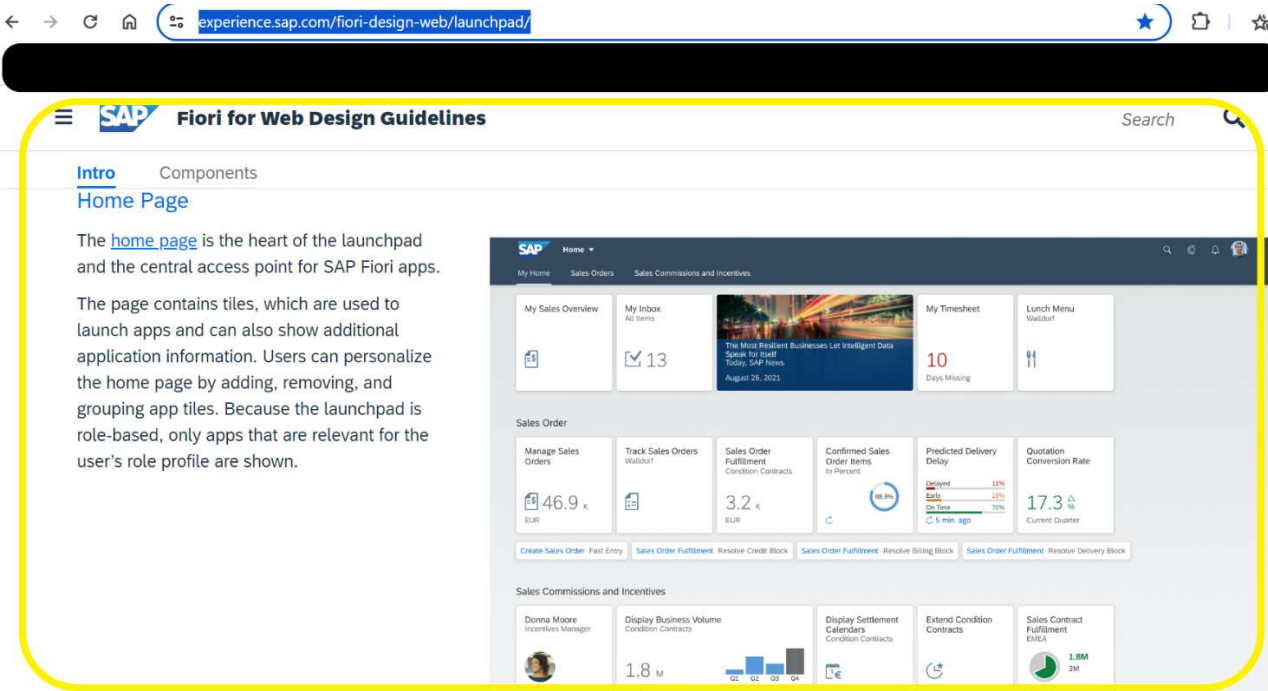
Launchpad home page - Size S



Launchpad home page - Size L / XL

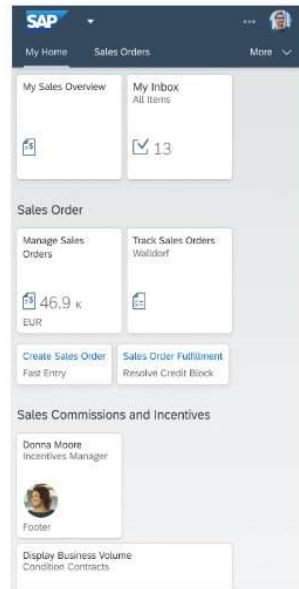
See pages 1-2 of SAP Fiori Launchpad Home Page, Updated on April 17, 2023,
<https://experience.sap.com/fiori-design-web/home-page/>.

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.

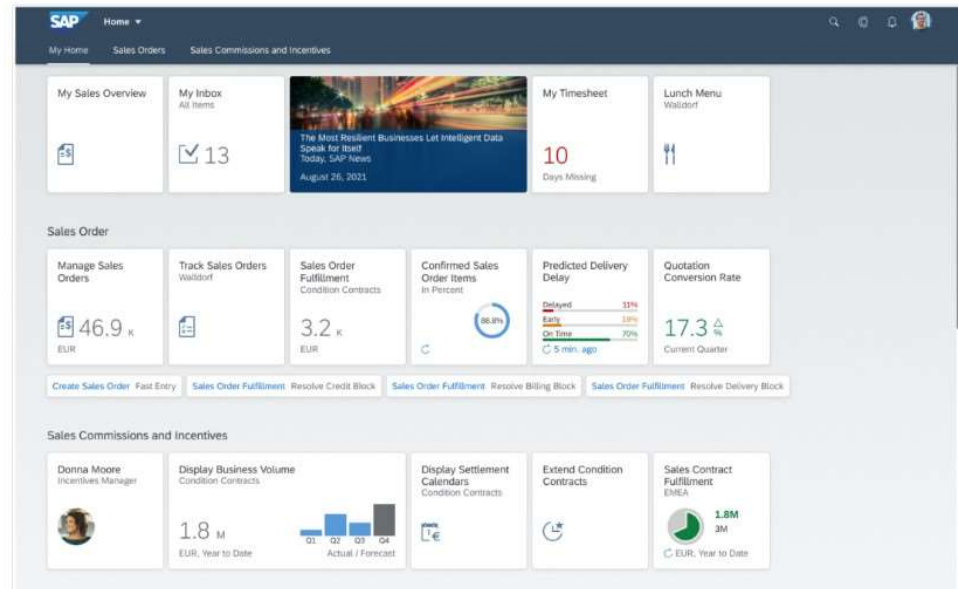
‘641 Patent Claim 9	
9. The apparatus of claim 1, wherein the user-selectable items included in the channel grid framework are identically sized rectangular user-selectable items.	See Claim 1. Further, the tiles in the Accused Instrumentalities are contained in a matrix in the channel grid framework. As shown below, the tiles display information and are identically sized rectangular user-selectable items.  The screenshot shows the SAP Fiori launchpad interface. The browser address bar displays experience.sap.com/fiori-design-web/launchpad/. The page title is "Fiori for Web Design Guidelines". The main content area is titled "Intro Components Home Page". It describes the home page as the central access point for SAP Fiori apps, containing tiles for launching apps and showing application information. The tiles are arranged in a grid. The tiles shown include: "My Sales Overview" (46.9 k EUR), "My Inbox" (13 items), "My Timesheet" (10 days missing), "Lunch Menu Waldorf", "Sales Order Fulfillment" (3.2 k EUR), "Confirmed Sales Order Items in Percent" (66.0%), "Predicted Delivery Delay" (13% delayed, 25% safe, 62% on time), "Quotation Conversion Rate" (17.3%), "Create Sales Order Fast Entry", "Sales Order Fulfillment Resolve Credit Block", "Sales Order Fulfillment Resolve Billing Block", "Sales Order Fulfillment Resolve Delivery Block", "Sales Commissions and Incentives" (1.8 M), "Display Business Volume Condition Contracts", "Display Settlement Calendars Condition Contracts", "Extend Condition Contracts", and "Sales Contract Fulfillment EMEA" (1.8M 3M). https://experience.sap.com/fiori-design-web/launchpad/

Responsiveness

The SAP Fiori launchpad home page is fully responsive. For smaller screens, the tiles are smaller so that at least two tiles can be always be shown side by side.



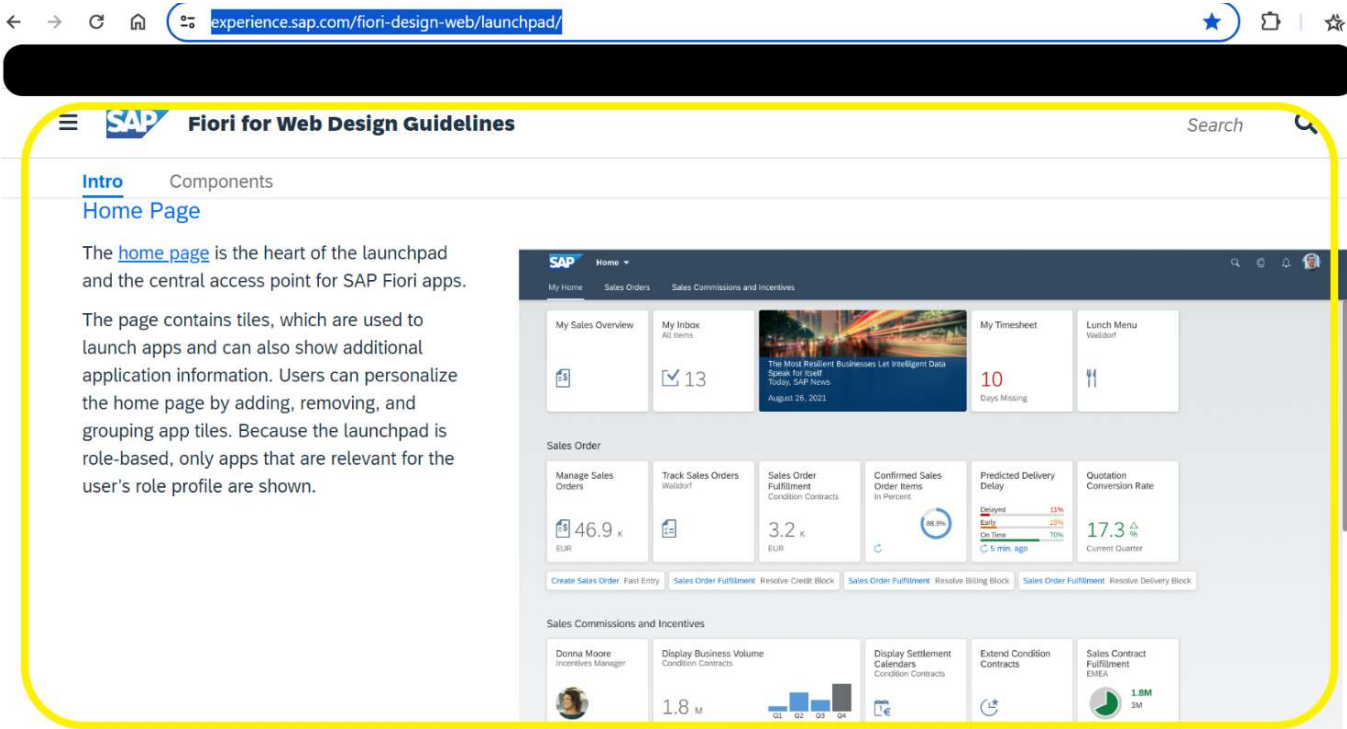
Launchpad home page - Size S



Launchpad home page - Size L / XL

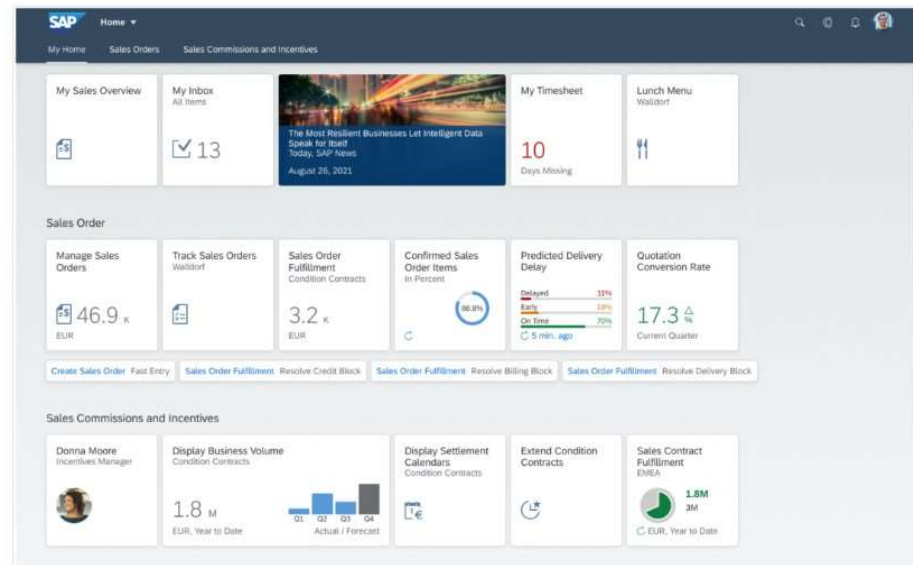
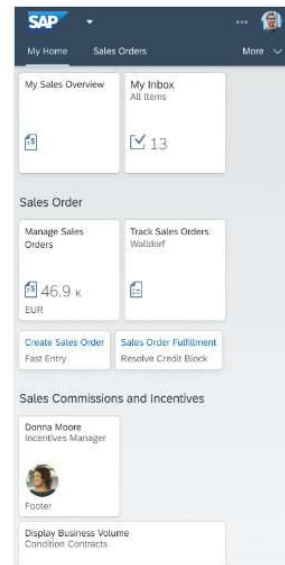
See pages 1-2 of SAP Fiori Launchpad Home Page, Updated on April 17, 2023,
<https://experience.sap.com/fiori-design-web/home-page/>.

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.

‘641 Patent Claim 10.	
10. The apparatus of claim 1, wherein the channel grid framework includes a matrix of square elements respectively constituting the user-selectable items.	See Claim 1. Further, the tiles in the Accused Instrumentalities are contained in a matrix in the channel grid framework. The excerpts below show that there is a matrix of square elements or tiles, each representing an application that provides the user with access to the information by clicking on these user-selectable items.  https://experience.sap.com/fiori-design-web/launchpad/

Responsiveness

The SAP Fiori launchpad home page is fully responsive. For smaller screens, the tiles are smaller so that at least two tiles can be always be shown side by side.



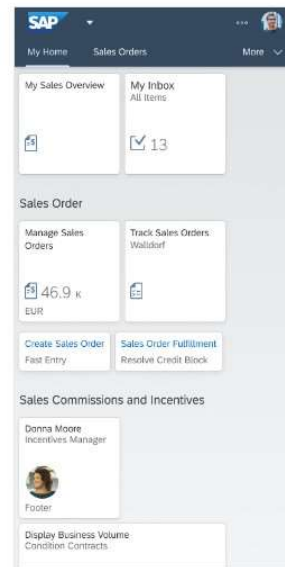
See pages 1-2 of SAP Fiori Launchpad Home Page, Updated on April 17, 2023,
<https://experience.sap.com/fiori-design-web/home-page/>.

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.

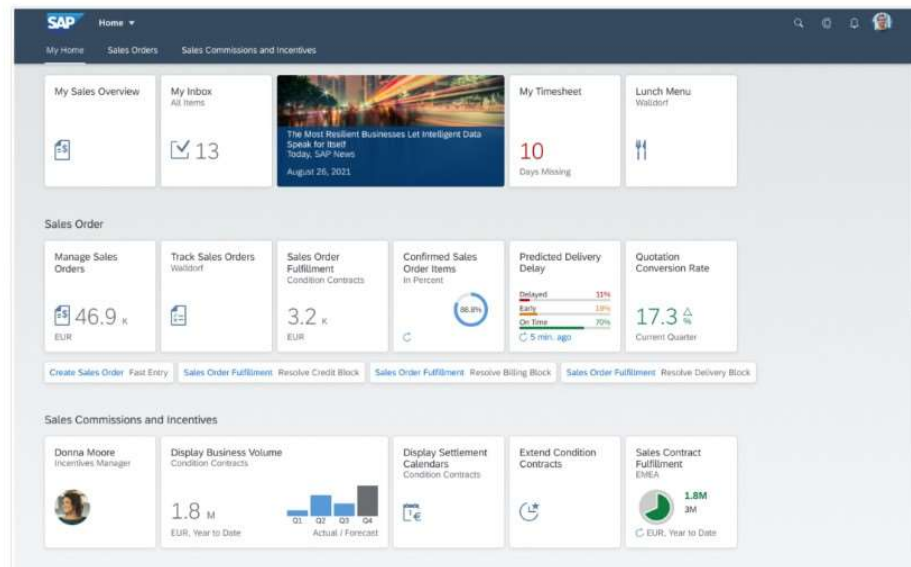
‘641 Patent Claim 11	
11. The apparatus of claim 1, wherein the channel grid framework includes a three-by-four matrix of the user-selectable items.	See Claim 1. Further, the Accused Instrumentalities may include a three-by-four matrix of user-selectable items constituting the channel grid framework. The excerpts below show the matrix of elements or tiles each representing an application that provides the user with access to the information in the application. The screenshot displays the SAP Fiori 'Home' page, which is a central access point for various SAP applications. It features a three-by-four matrix of user-selectable items (tiles) that provide quick access to different data and functions. The tiles are organized into sections: 'My Home' (top left), 'Sales Orders' (middle), and 'Sales Commissions and Incentives' (bottom). The tiles include various visualizations such as bar charts, line graphs, and status indicators. The overall layout is clean and modern, with a clear hierarchy of information. https://experience.sap.com/fiori-design-web/launchpad/

Responsiveness

The SAP Fiori launchpad home page is fully responsive. For smaller screens, the tiles are smaller so that at least two tiles can be always be shown side by side.



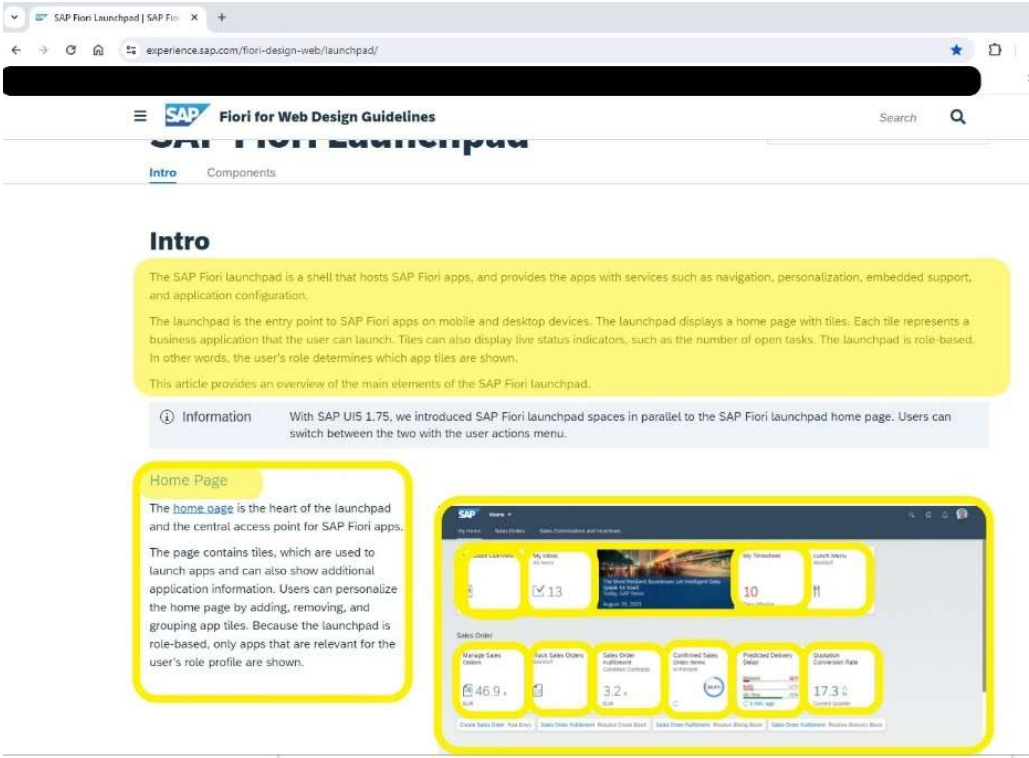
Launchpad home page - Size S

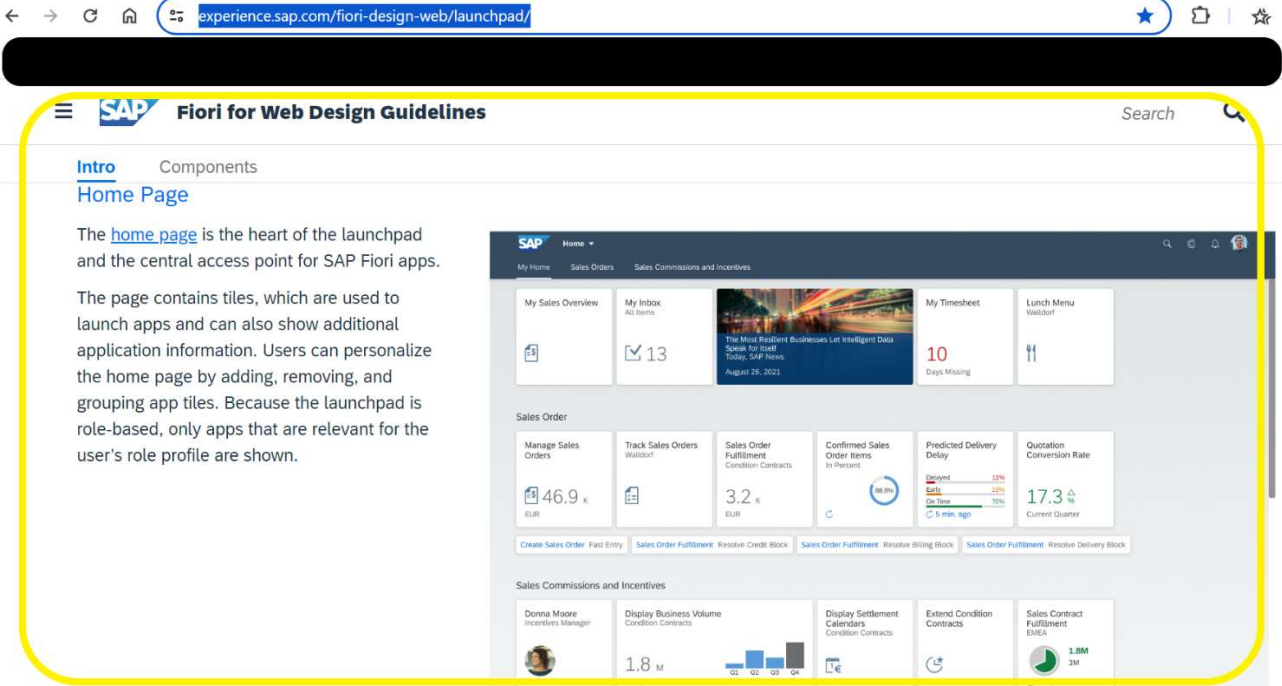


Launchpad home page - Size L / XL

See pages 1-2 of SAP Fiori Launchpad Home Page, Updated on April 17, 2023,
<https://experience.sap.com/fiori-design-web/home-page/>.

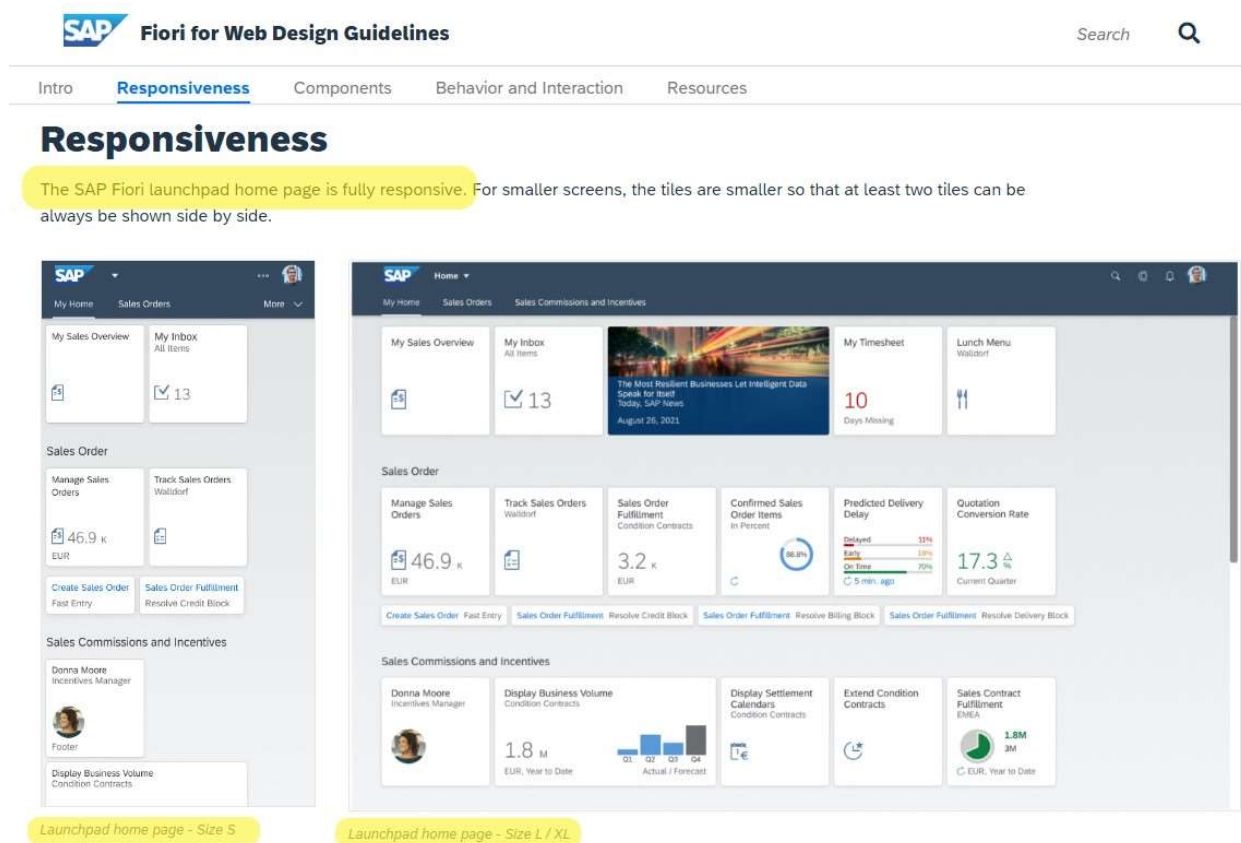
As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.

‘641 Patent Claim 13	
13(a). The apparatus of claim 1, wherein: the plurality of authorized channels includes a first channel through which the user receives and/or interacts with first channel information constituting a first portion of the secure user-centric information; the plurality of user-selectable item representing the first channel; and	See Claim 1. SAP Fiori is a matrix of tiles and links that display and launch the corresponding apps on the Launchpad. Each of the links is a secure user-centric channel associated with an app, and that user’s data can be sent to be displayed, and the user can interact with it. As shown below, “[e]ach tile represents a business application that the user can launch.” See https://experience.sap.com/fiori-design-web/launchpad/. 

	https://experience.sap.com/fiori-design-web/launchpad/ As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.
13(b). A) comprises controlling the display device so as to render ration description; the first user-selectable item in the channel grid framework as one of: a data layer; a graphic representative of the first channel information; a picture representative of the first channel information; a configuration layer to display a channel customization form; and an alert layer. And a dynamic window including at least one of: content from an executing computer application constituting the first channel information;	The Accused Instrumentalities control the user display device, and include a matrix of tiles and links that display and launch the corresponding apps on the Launchpad. Each of the links is a secure user-centric channel associated with an app, and that user's data can be sent to be displayed, and the user can interact with it. The excerpts below show the matrix of elements or tiles; each is a graphical representation of an application that provides the user with access to the information in the application. 

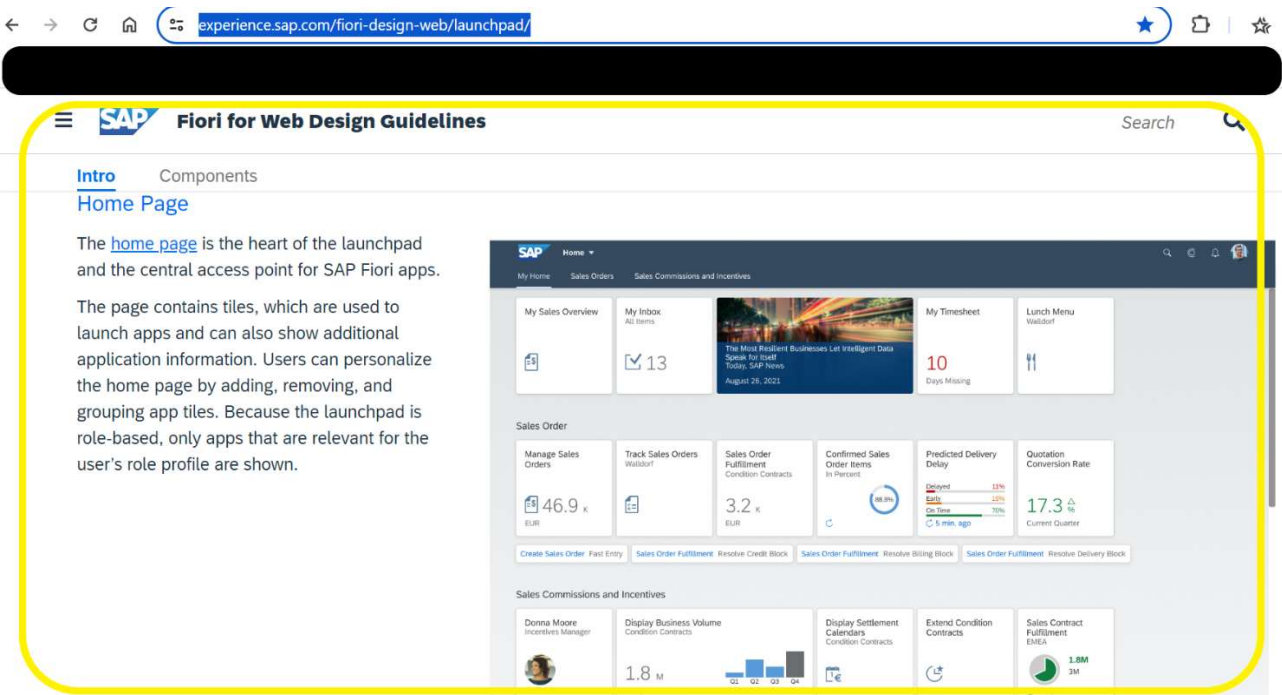
a video representative of the first channel information; streaming data, audio or video constituting at least a portion of the first channel information; and polled data derived from the first channel information.

<https://experience.sap.com/fiori-design-web/launchpad/>



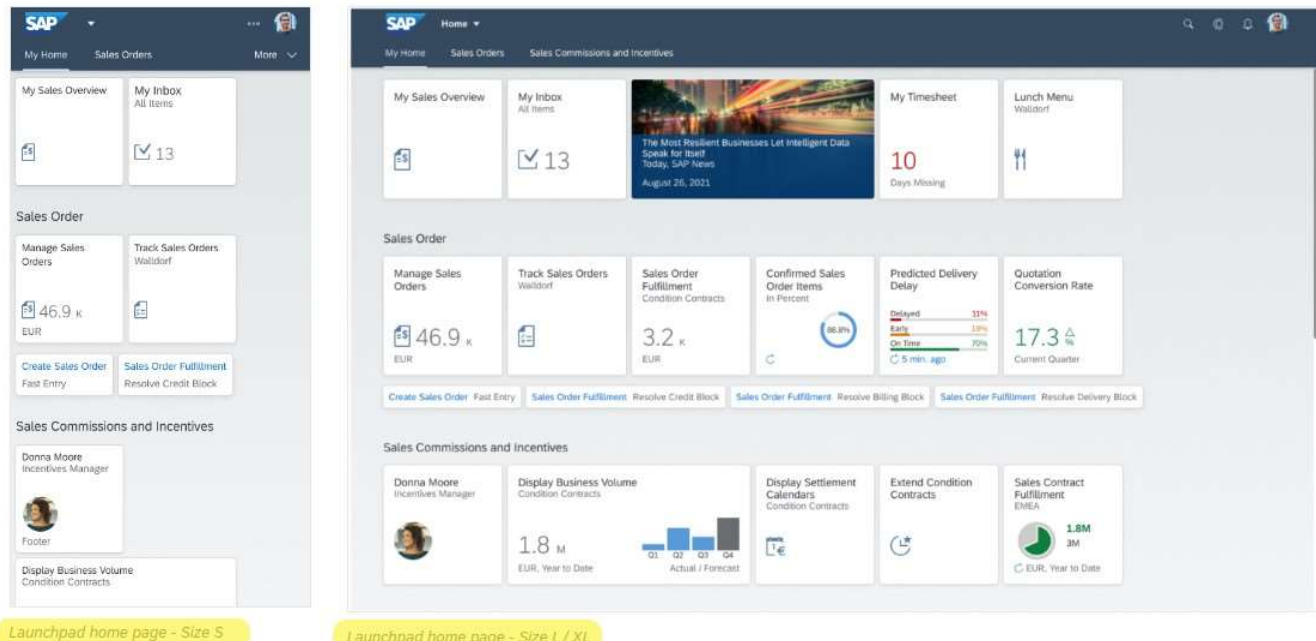
See pages 1-2 of SAP Fiori Launchpad Home Page, Updated on April 17, 2023,
<https://experience.sap.com/fiori-design-web/home-page/>.

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.

‘641 Patent Claim 16	
16. The apparatus of claim 1, wherein each user-selectable items of the plurality of user-selectable items included in the channel grid framework is implemented by execution of the processor-executable instructions as a channel container having a unique name and a unique location in the channel grid framework.	See Claim 1. The Accused Instrumentalities include SAP Fiori, which is a matrix of tiles and links that display and launch the corresponding apps on the Launchpad. These user-selectable items, which constitute the channel grid framework, is implemented by execution of the processor-executable instructions. The excerpts below show the matrix of elements or tiles each representing an application and having a unique name and location in the channel grid framework.  The screenshot shows the SAP Fiori Launchpad interface. The browser address bar displays https://experience.sap.com/fiori-design-web/launchpad/. The page title is "Fiori for Web Design Guidelines". The main content area is titled "Intro Components" and "Home Page". It describes the home page as the heart of the launchpad and the central access point for SAP Fiori apps. The page contains tiles, which are used to launch apps and can also show additional application information. Users can personalize the home page by adding, removing, and grouping app tiles. Because the launchpad is role-based, only apps that are relevant for the user's role profile are shown. The screenshot also shows a grid of tiles representing various applications and data points: My Sales Overview: Shows 46.9 k EUR. My Inbox: Shows 13 items. Sales Order: Shows 3.2 k EUR. Confirmed Sales Order Items: Shows 88.8%. Predicted Delivery Delay: Shows 10 days missing. Quotation Conversion Rate: Shows 17.3%. Sales Commissions and Incentives: Shows 1.8 M. Sales Contract Fulfillment: Shows 1.8M. https://experience.sap.com/fiori-design-web/launchpad/

Responsiveness

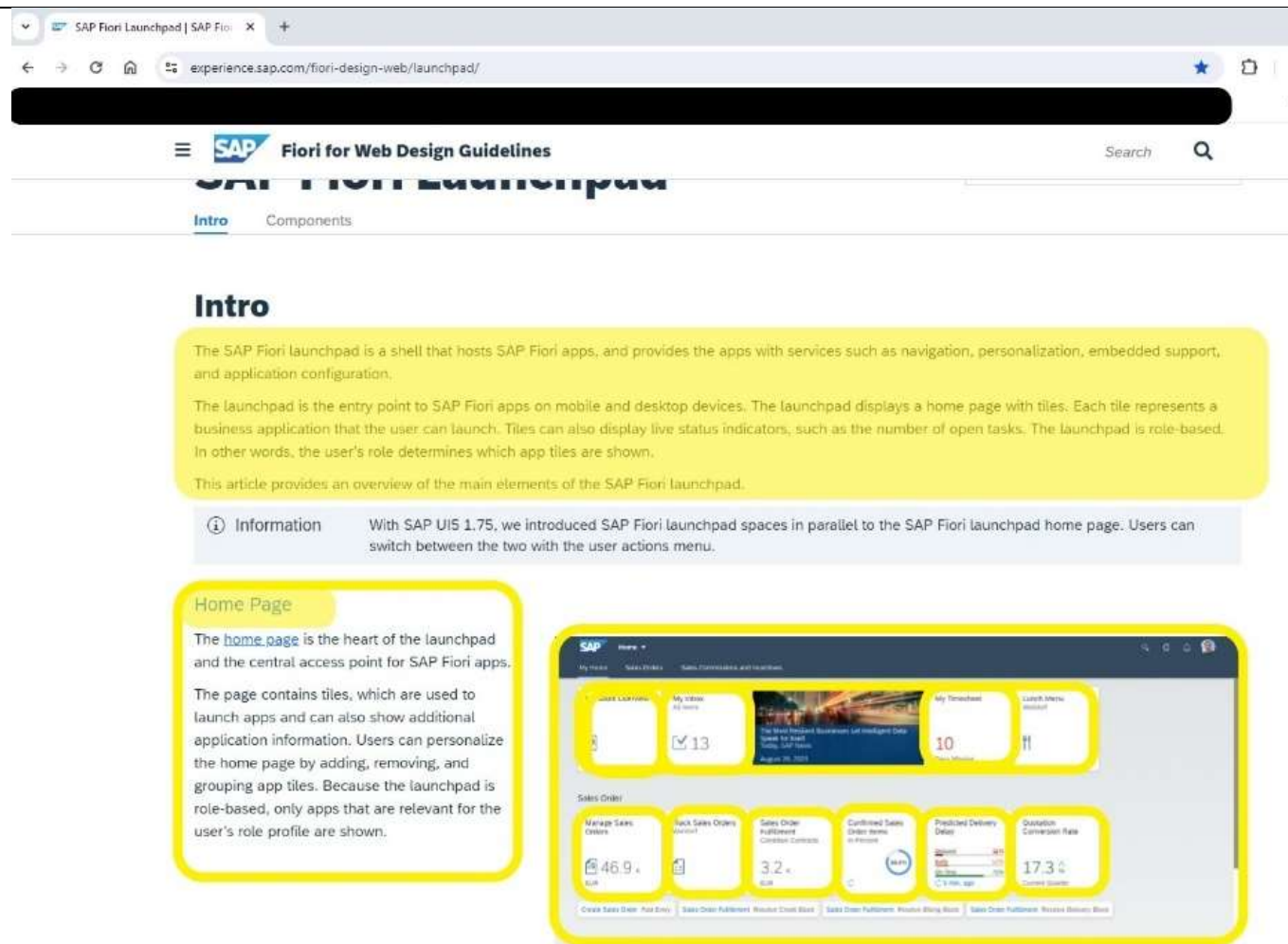
The SAP Fiori launchpad home page is fully responsive. For smaller screens, the tiles are smaller so that at least two tiles can be always be shown side by side.



See pages 1-2 of SAP Fiori Launchpad Home Page, Updated on April 17, 2023,
<https://experience.sap.com/fiori-design-web/home-page/>.

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.

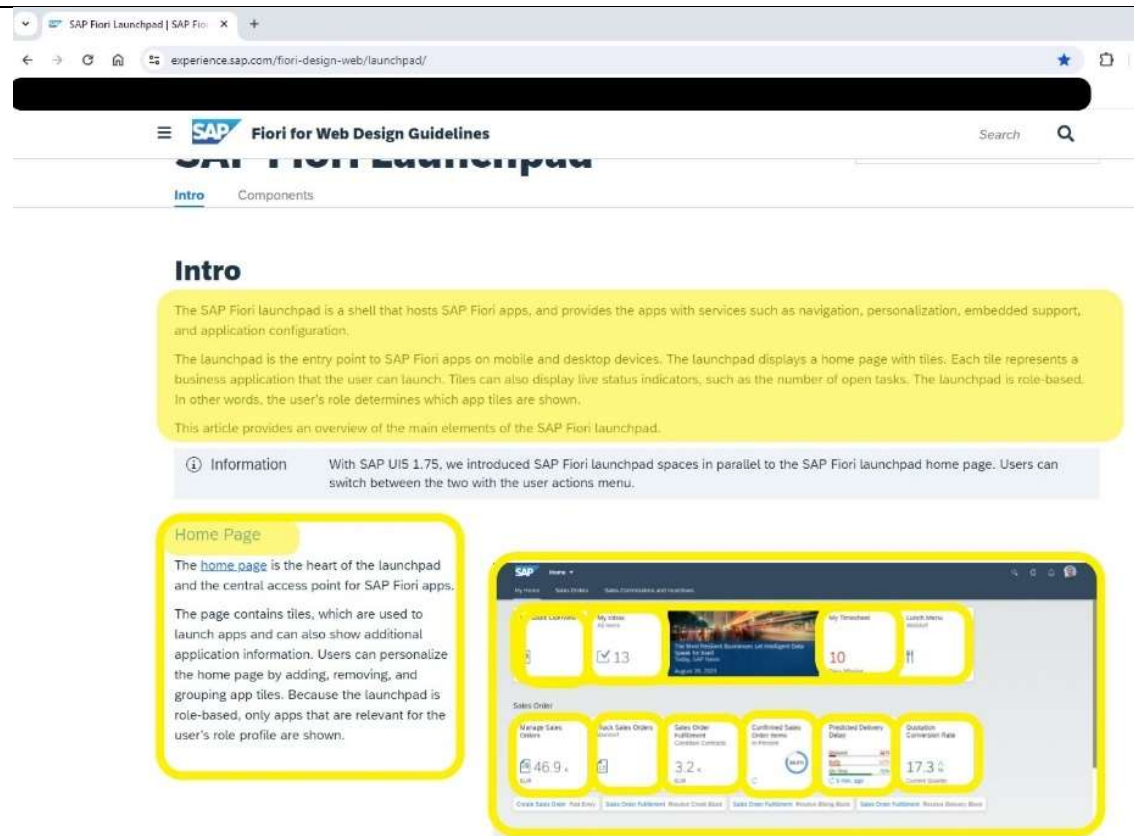
'641 Patent Claim 18	
18(a). The apparatus of claim 1, wherein the at least one processor further manages display of and interaction with the secure user-centric information by:	See Claim 1. Further, a CPU, or processor, manages display of and the interaction with the secure information to the user. As shown by the excerpt below, SAP Fiori is a matrix of tiles and links and each of the links is a secure user-centric channel associated with an app, and that user's data can be sent to be displayed, and the user can interact with it.



<https://experience.sap.com/fiori-design-web/launchpad/>

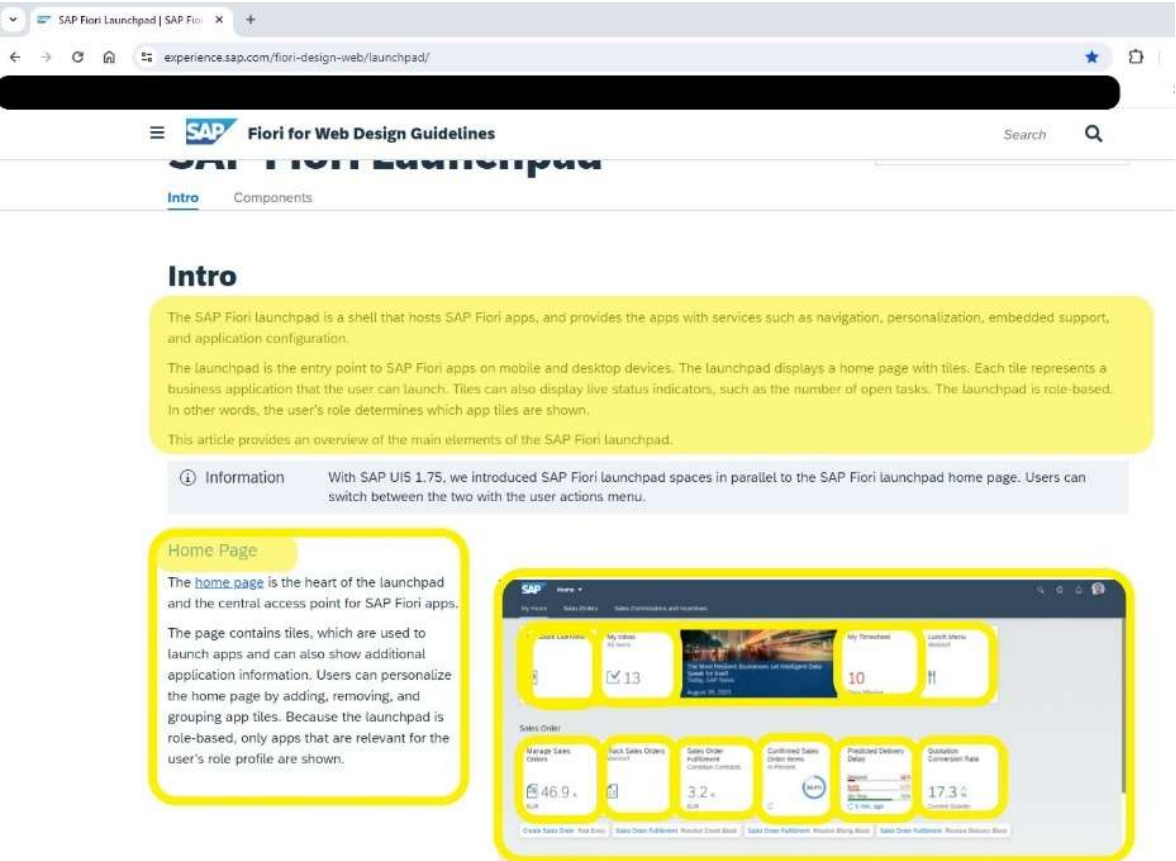
As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

18(b). C) controlling the at least one communication interface so as to receive from at least one external computing device first channel information relating to at least one authorized channel of the plurality of authorized channels, based at least in part on the information access rights and/or security protocols respectively associated with the corresponding plurality of authorized channels, the user, and the user platform.	The Accused Instrumentalities control and allow the communication interface so as to receive the secure user-centric channel information according to the user's authorized application(s), and access rights, platform used by the user. As shown by the excerpt below, SAP Fiori is a matrix of tiles and links and each of the links is a secure user-centric channel associated with an app, and that user's data can be sent to be displayed, and the user can interact with it. As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.
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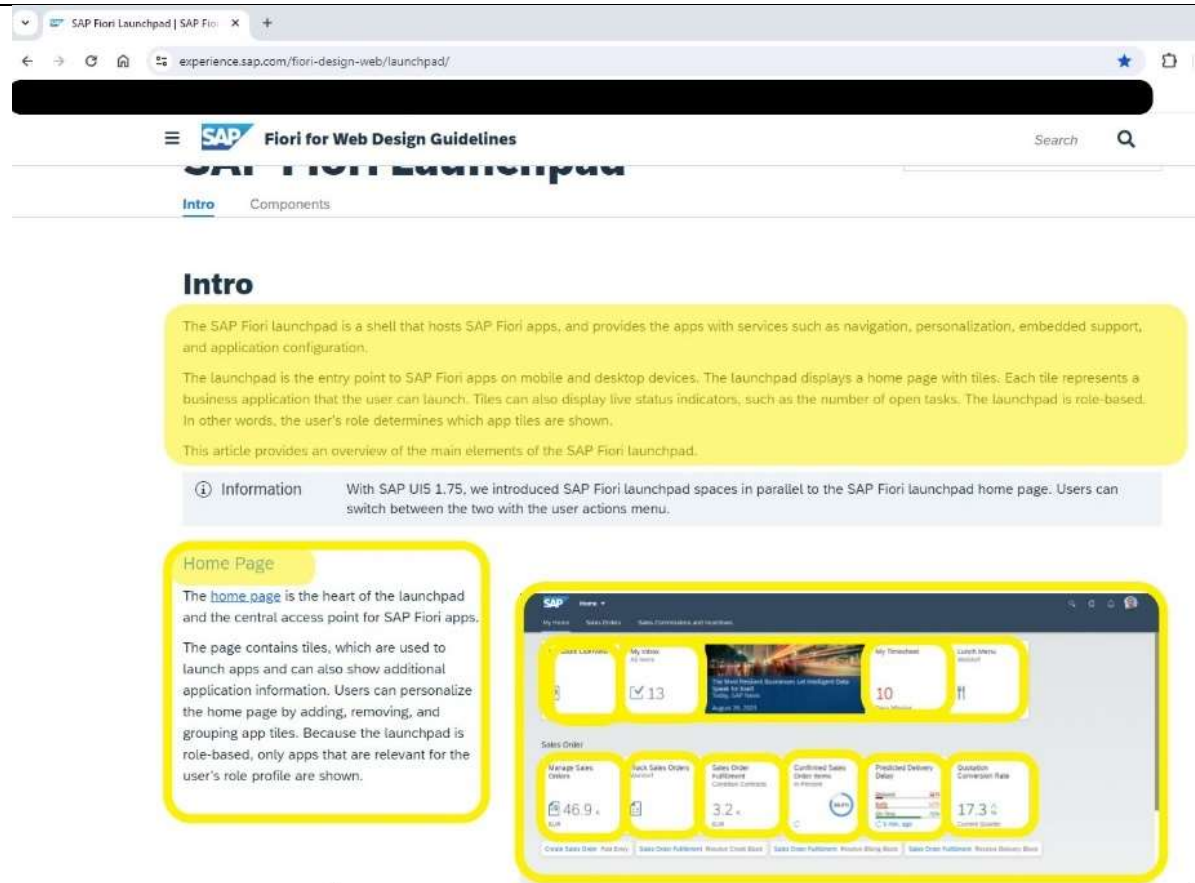


<https://experience.sap.com/fiori-design-web/launchpad/>

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

‘641 Patent Claim 31	The Accused Instrumentalities operate as a method that allows the user to access a set of applications that provide and show relevant information on any platform (e.g., Windows computer, apple computer, and android mobile device, web browser interface, etc.) used by the user. As shown by the excerpt below, SAP Fiori is a matrix of tiles and links that display and launch the corresponding apps on the Launchpad. Each of the links is a secure user-centric channel associated with an app, and that user’s data can be sent to be displayed, and the user can interact with it during a user session.  The screenshot shows the SAP Fiori Launchpad interface. The top navigation bar includes the SAP logo and the title 'Fiori for Web Design Guidelines'. Below this, there's a search bar and a navigation menu with 'Intro' and 'Components'. The main content area is titled 'Intro' and contains several paragraphs of text explaining the launchpad's purpose and how it displays tiles for different business applications. A yellow box highlights the 'Home Page' section, which states that the home page is the heart of the launchpad and contains tiles for launching apps. To the right of the text, there's a screenshot of the SAP Fiori Launchpad home page, which shows a grid of tiles for various business applications, including 'My Values', 'Sales Orders', and 'Predicted Delivery'. The tiles display live status indicators and are personalized based on the user's role.
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	https://experience.sap.com/fiori-design-web/launchpad/ As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.
31(b). A) displaying a desktop on a display device of the user platform as a channel grid framework including a matrix having a plurality of user-selectable items representing a corresponding plurality of authorized channels through which the user receives and/or interacts with respective portions of the secure user-centric information, and	The user desktop is displayed as a channel grid framework on any display device of the user. The channel grid framework includes tiles as selectable items, representing the applications and are. Tiles display secure information specific to the user and the use of the application. As shown below, the excerpt shows that a desktop on any display device of the user. There is a matrix of elements each representing an application that provides the user with access to secure information in the application.



<https://experience.sap.com/fiori-design-web/launchpad/>

As described above, this element’s functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.

31(c). B) receiving configuration

See Claim 1(d). (B) starting with “receiving configuration information from the user and transmitting the configuration information to at least one external computing device . . .”

information from the user and transmitting the configuration information to at least one external computing device, wherein the configuration information is configured to cause the at least one external computing device to establish a user profile identifying user preferences, platform identities, and service support instructions that determine how the plurality of authorized channels behave on the user platform, wherein the at least one external computing device is configured to synchronize functions and features of one or more of the plurality of channels across a plurality of user	As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.
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platforms by deploying secure user-centric information to the plurality of user platforms;	
31(d). wherein at least a portion of the user-centric information provided to the user through the plurality of authorized channels is based at least in part on information access rights and/or security protocols respectively associated with the corresponding plurality of channels, the user, and the user platform, and wherein at least a portion of the user-centric information provided to the user through the plurality of authorized channels is based at least in part on the	See Claim 1(e) starting with “wherein at least a portion of the user-centric information provided to the user through the plurality of authorized channels is based at least in part on information access rights and/or security protocols . . .” As described above, this element’s functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

user profile and is provided to the user without being requested by the user; and	
31(e). wherein at least a portion of the secure user-centric information provided to the user through the plurality of authorized channels is received based in part on a bi-directional interrogation of one or more of the plurality of authorized channels, wherein the bi-directional interrogation comprises the one or more of the plurality of authorized channels interrogating an identity management server, and wherein the bi-directional interrogation further comprises the	See Claim 1(f) starting with “wherein at least a portion of the secure user-centric information provided to the user through the plurality of authorized channels is received based in part on a bi-directional interrogation of one or more of the plurality of authorized channels . . .” As described above, this element’s functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.

identity management server and a web services gateway interrogating the one or more of the plurality of authorized channels, wherein the web services gateway is a tool through which the channel grid framework interacts with the identity management server.	
‘641 Patent Claim 32	
32(a). At least one non-transitory computer readable storage medium storing processor-executable instructions that, when executed by at least one processor, perform a method for facilitating display of, and interaction with, secure user-centric information via a user platform	The Accused Instrumentalities operated as a method and include a non-transitory computer readable media with computer readable instructions because they are applications stored on non-transitory mediums, such as hard drives, both by SAP and the customers of SAP. This software can be stored on one computer system or distributed over multiple computer systems. When the processor carries out the instructions stored in the computer readable media, this computer readable media in the Accused Instrumentalities facilitates display of, and interaction with secure user-centric information through the user platforms operated by the user. The excerpt below shows examples of different platforms operated by a user that provide secure user-centric information to the user through the Accused Instrumentalities. The excerpt below shows examples of different platforms operated by a user that provide secure user-centric information to the user through the Accused Instrumentalities.

operated by a user,
the method
comprising:



See page 2 of SAP Fiori tutorialspoint (<https://pdfcoffee.com/sap-fiori-pdf-free.html>).
The following describes how the Accused Instrumentalities host and provide forms through SAP Fiori application content.

See SAP Fiori – Installation webpage, (https://www.tutorialspoint.com/sap_fiori/sap_fiori_installation.htm);
see also
https://help.sap.com/docs/SAP_FIORI_OVERVIEW/9b4ee51ce91e4a9cadd5e6d43c2992ba/260a16bb03a34316ba17503beec31ccc.html.

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.



See page 2 of SAP Fiori tutorialspoint (<https://pdfcoffee.com/sap-fiori-pdf-free.html>). The following describes how the Accused Instrumentalities host and provide forms through SAP Fiori application content.

See SAP Fiori – Installation webpage, (https://www.tutorialspoint.com/sap_fiori/sap_fiori_installation.htm); see also https://help.sap.com/docs/SAP_FIORI_OVERVIEW/9b4ee51ce91e4a9cadd5e6d43c2992ba/260a16bb03a34316ba17503beec31ccc.html.

As described above, this element’s functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.

32(b). A) displaying a desktop on a display device of the

See Claim 31(b). A) starting with “displaying a desktop on a display device of the user platform as a channel grid framework including a matrix having a plurality of user-selectable items . . .”

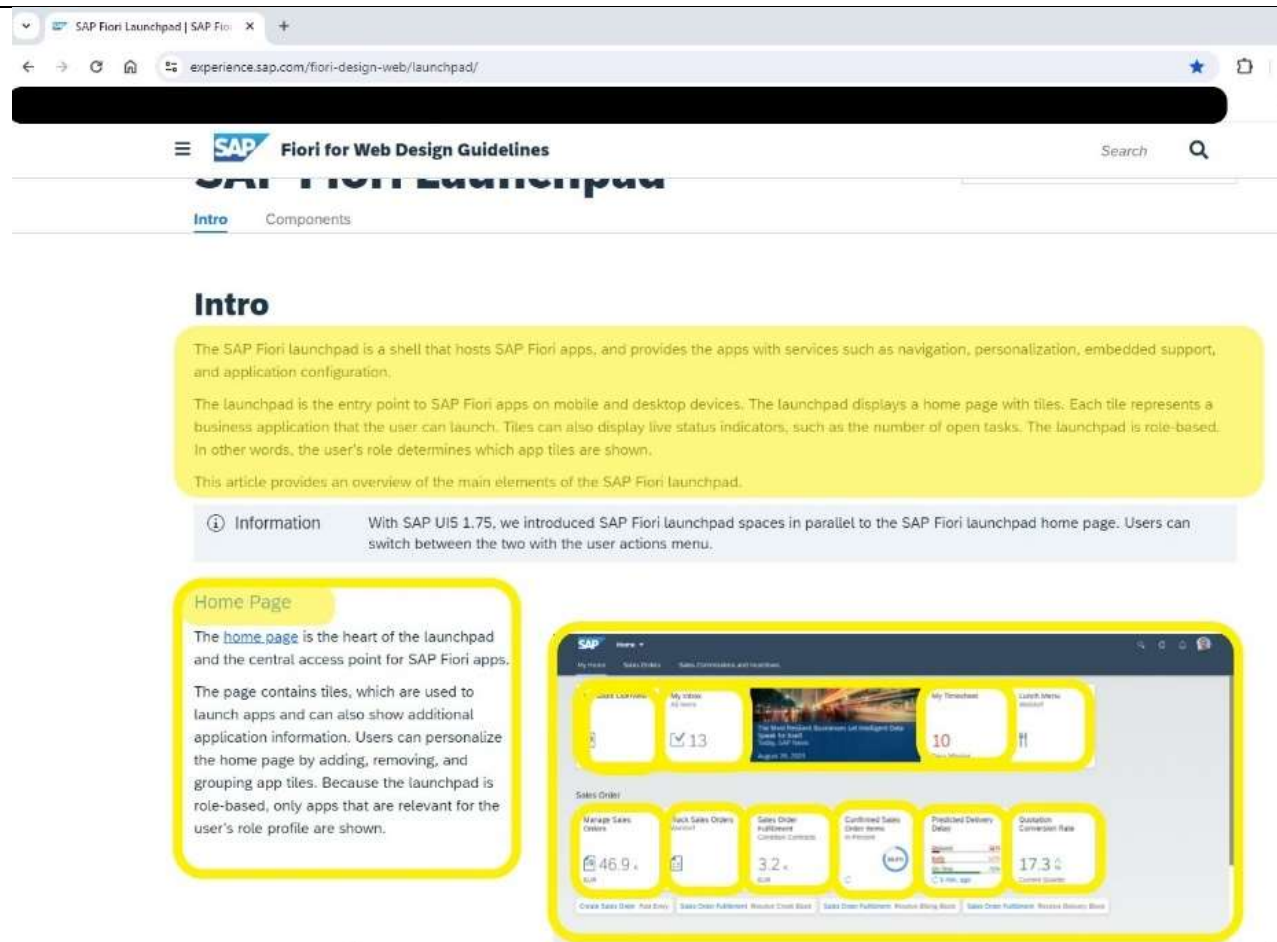
user platform as a channel grid framework including a matrix having a plurality of user-selectable items representing a corresponding plurality of authorized channels through which the user receives and/or interacts with respective portions of the secure user-centric information, and	As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.
32(c). B) receiving configuration information from the user and transmitting the configuration information to at least one external computing device, wherein the configuration information is configured to cause the at least one external computing device to establish a	See Claim 1(d). B) starting with "receiving configuration information from the user and transmitting the configuration information to at least one external computing device . . ." As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.

user profile identifying user preferences, platform identities, and service support instructions that determine how the plurality of authorized channels behave on the user platform, wherein the at least one external computing device is configured to synchronize functions and features of one or more of the plurality of channels across a plurality of user platforms by deploying secure user-centric information to the plurality of user platforms;	
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32(d). wherein at least a portion of the user-centric information provided to the user through the plurality of authorized channels is based at least in part on information access rights and/or security protocols respectively associated with the corresponding plurality of authorized channels, the user, and the user platform, and wherein at least a portion of the user-centric information provided to the user through the plurality of authorized channels is based at least in part on the user profile and is provided to the user without being requested by the user; and	See Claim 1(e) starting with “wherein at least a portion of the user-centric information provided to the user through the plurality of authorized channels is based at least in part on information access rights and/or security protocols . . .” As described above, this element’s functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.
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32(e). wherein at least a portion of the secure user-centric information provided to the user through the plurality of authorized channels is received based in part on a bi-directional interrogation of one or more of the plurality of authorized channels, wherein the bi-directional interrogation comprises the one or more of the plurality of authorized channels interrogating an identity management server, and wherein the bi-directional interrogation further comprises the identity management server and a web services gateway interrogating the one or more of the plurality of	See Claim 1(f) starting with “wherein at least a portion of the secure user-centric information provided to the user through the plurality of authorized channels . . .” As described above, this element’s functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.
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authorized channels, wherein the web services gateway is a tool through which the channel grid framework interacts with the identity management server.	
'641 Patent Claim 33	
33(a). An apparatus serving as a user platform operated by a user to facilitate display of, and interaction with, secure user-centric information, the apparatus comprising:	The Accused Instrumentalities serve as a platform operated by a user to facilitate the display of relevant information (e.g., Windows computer, apple computer, android mobile device, web browser interface, etc.). As shown by the excerpt below, SAP Fiori is a matrix of tiles and links that display and launch the corresponding apps on the Launchpad. Each of the links is a secure user-centric channel associated with an app, and that user's data can be sent to be displayed, and the user can interact with it during a user session.



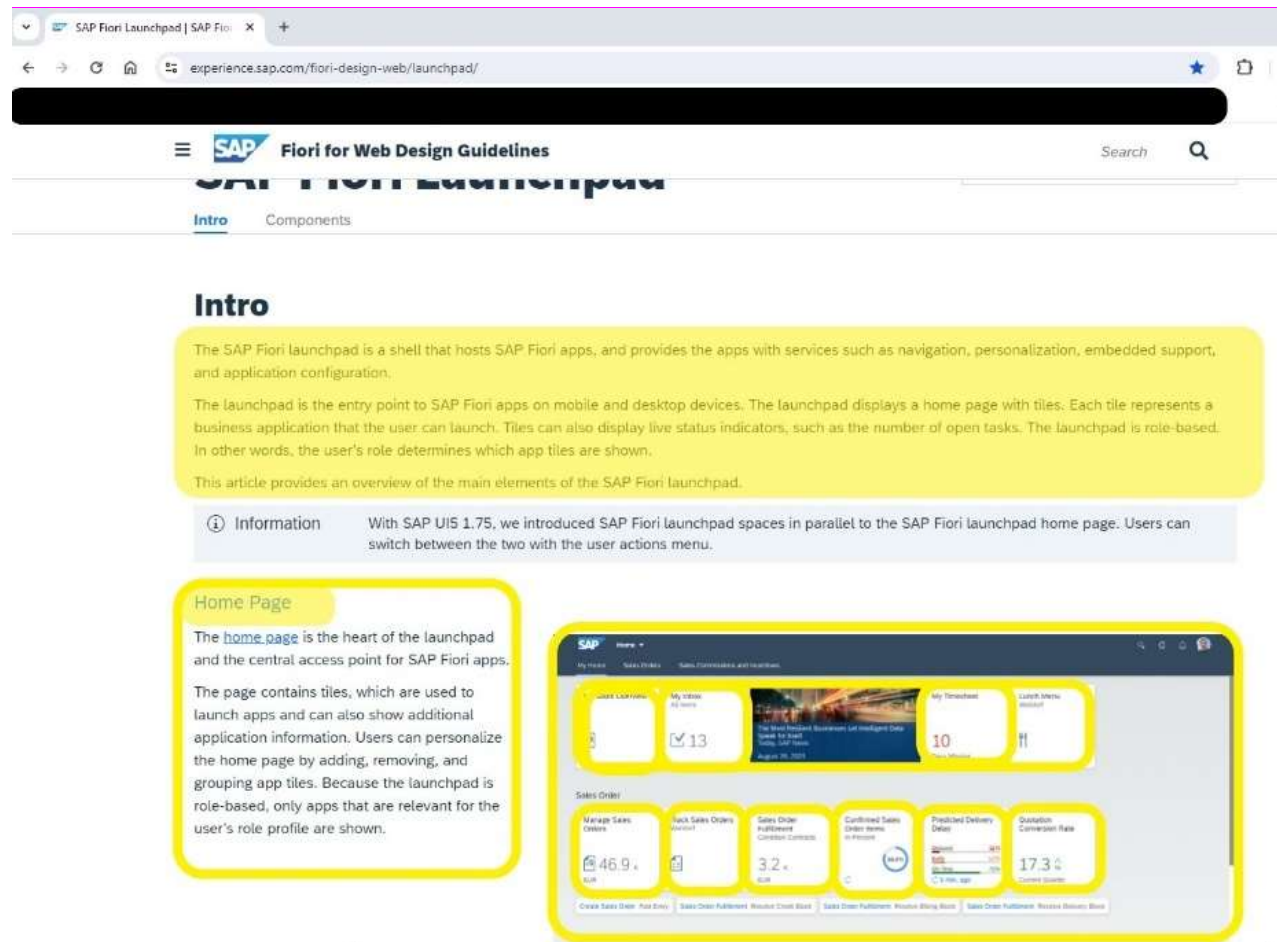
<https://experience.sap.com/fiori-design-web/launchpad/>

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.

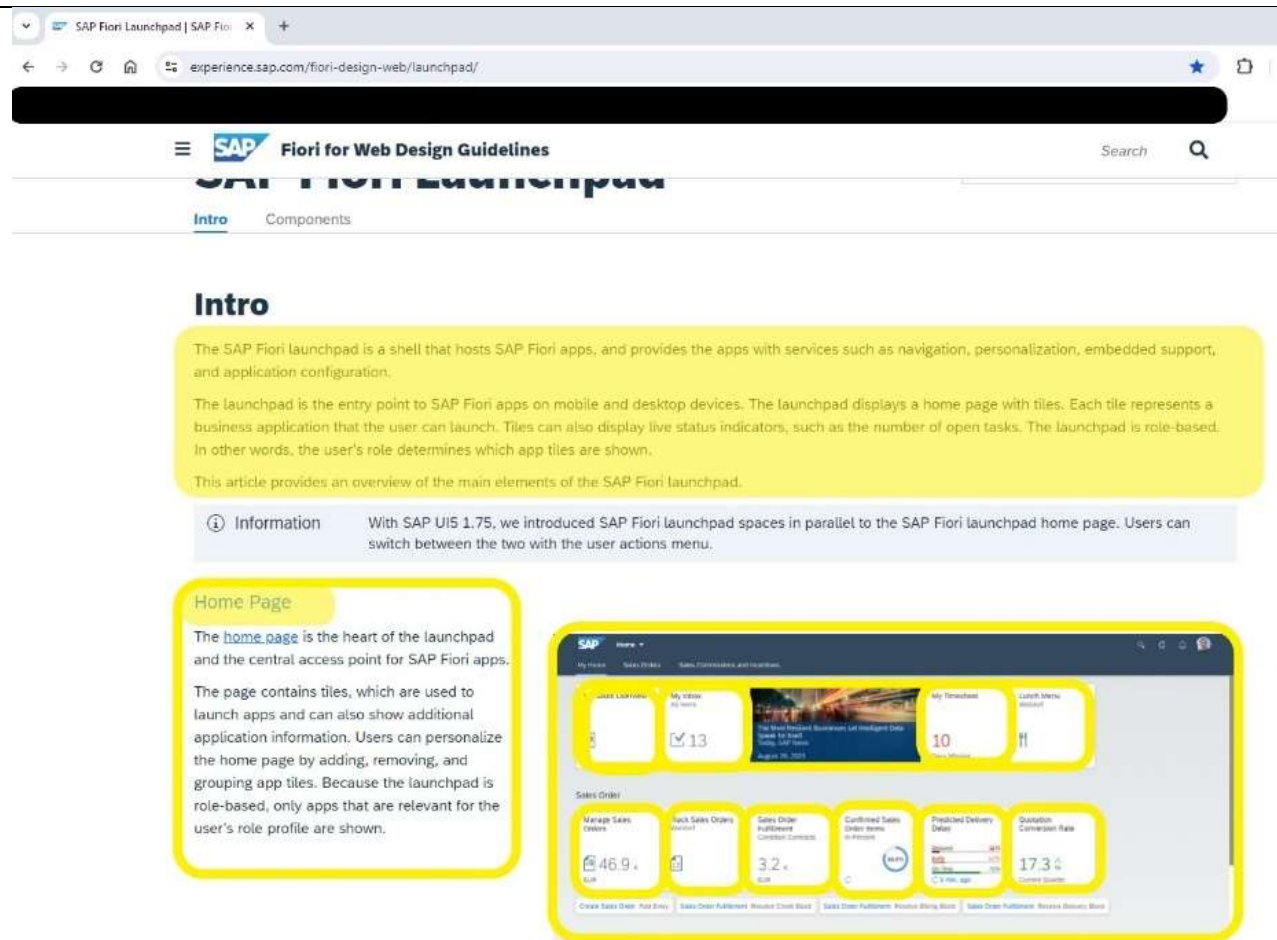
33(b). a display device to display a desktop for the user platform;

The Accused Instrumentalities include a display device to display a desktop for the user platform (e.g., Windows computer, apple computer, android mobile device, web browser interface, etc.).

As shown by the excerpt below, SAP Fiori is a matrix of tiles and links that display and launch the corresponding apps on the Launchpad. Each of the links is a secure user-centric channel associated with an app, and that user's data can be sent to be displayed, and the user can interact with it during a user session.



	https://experience.sap.com/fiori-design-web/launchpad/ As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.
33(c). at least one communication interface to facilitate wired and/or wireless communications via one or more transmission media;	The Accused Instrumentalities include software to display SAP Fiori with application tiles on any device used by the user. "Each tile represents a business application that the user can launch." See https://experience.sap.com/fiori-design-web/launchpad/. The Accused Instrumentalities include display software for displaying SAP Fiori that can interact with hardware, such as monitors. The Accused Instrumentalities include software to facilitate wired and wireless communications through hardware that is used, such as wired and wireless transceivers. As shown by the excerpt below, SAP Fiori is a matrix of tiles and links that display and launch the corresponding apps on the Launchpad. Each of the links is a secure user-centric channel associated with an app, and that user's data can be sent to be displayed, and the user can interact with it during a user session.

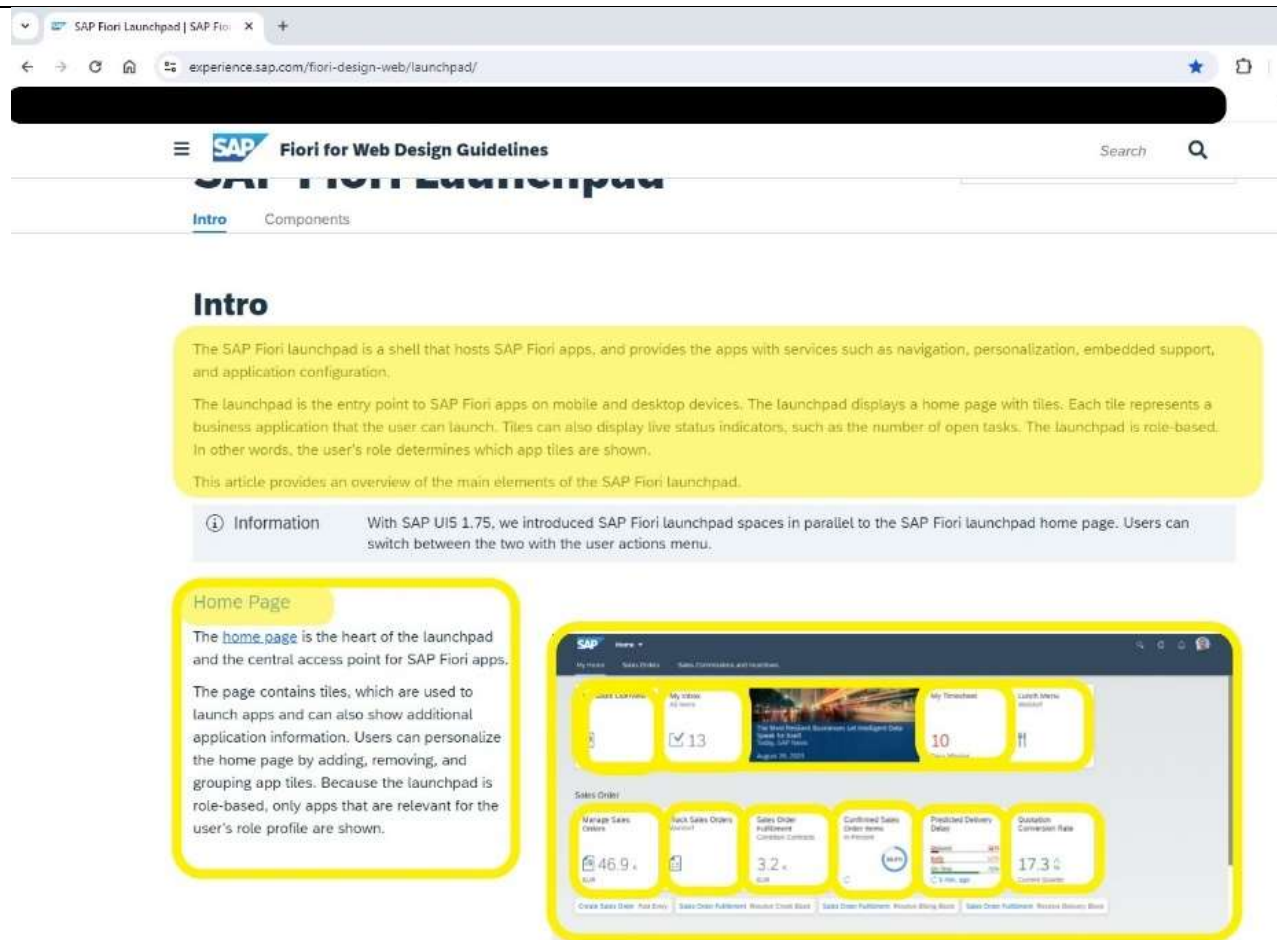


<https://experience.sap.com/fiori-design-web/launchpad/>

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.

33(d). at least one memory to store processor-executable instructions; and	The Accused Instrumentalities operate with software to act as memory and manage hardware memory while operating. The Accused Instrumentalities also perform actions because they include software processing components for running the software and managing a hardware processor. Furthermore, the Accused Instrumentalities include memory allocation in software, as well as hardware memory to store processor-executable instructions, as shown by the excerpt below: SAP NW Installation Prerequisites The minimum hardware requirements for SAP NetWeaver Gateway front-end server are as follows: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: center;">Requirements</th><th style="text-align: center;">Specification</th></tr> </thead> <tbody> <tr> <td style="text-align: center;">Processor</td><td>Dual Core(2 logical CPUs) or higher, 2 GHz or higher</td></tr> <tr style="background-color: #ffffcc;"> <td style="text-align: center;">Random Access Memory (RAM)</td><td style="text-align: center;">8 GB or higher</td></tr> <tr> <td style="text-align: center;">Hard Disk Capacity</td><td style="text-align: center;">80 GB primary, or higher</td></tr> </tbody> </table> See Page 10 of SAP Fiori tutorialspoint (https://pdfcoffee.com/sap-fiori-pdf-free.html) As described above, this element’s functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.	Requirements	Specification	Processor	Dual Core(2 logical CPUs) or higher, 2 GHz or higher	Random Access Memory (RAM)	8 GB or higher	Hard Disk Capacity	80 GB primary, or higher
Requirements	Specification								
Processor	Dual Core(2 logical CPUs) or higher, 2 GHz or higher								
Random Access Memory (RAM)	8 GB or higher								
Hard Disk Capacity	80 GB primary, or higher								
33(e). at least one processor communicatively coupled to the display device, the at least one	The Accused Instrumentalities include software to display SAP Fiori with application tiles on any device used by the user. “Each tile represents a business application that the user can launch.” See https://experience.sap.com/fiori-design-web/launchpad/. The Accused Instrumentalities include display software for displaying SAP Fiori that can interact with hardware, such as monitors. The Accused Instrumentalities include software to facilitate wired and wireless communications through hardware that is used, such as wired and wireless transceivers. The Accused								

communication interface, and the at least one memory, wherein upon execution of the processor-executable instructions by the at least one processor, the at least one processor manages display of and interaction with the secure user-centric information by controlling the display device to display the desktop for the user platform as a channel grid framework including a matrix having a plurality of user-selectable items representing a corresponding plurality of authorized channels through which the user receives and/or interacts with respective portions of the secure user-centric information,	Instrumentalities operate with software to act as memory and manage hardware memory while operating. The Accused Instrumentalities also perform actions because they include software processing components for running the software and managing a hardware processor. As shown by the excerpt below, SAP Fiori is a matrix of tiles and links that display and launch the corresponding apps on the Launchpad. Each of the links is a secure user-centric channel associated with an app, and that user's data can be sent to be displayed, and the user can interact with it during a user session.
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<https://experience.sap.com/fiori-design-web/launchpad/>

Furthermore, the Accused Instrumentalities include a software display to the Fiori Launchpad, which will manage a hardware display, as shown in the example below.

learning.sap.com/learning-journeys/learn-the-basics-of-sap-fiori/introducing-sap-fiori_c3915ced-ffd1-4127-a822-e217ff45fd72

SAP Learning

Browse / Learning Journeys / Learning the Basics of SAP Fiori

Introducing SAP Fiori

After completing this lesson, you will be able to:

- Identify the dimensions of SAP Fiori
- Explain the principles of SAP Fiori

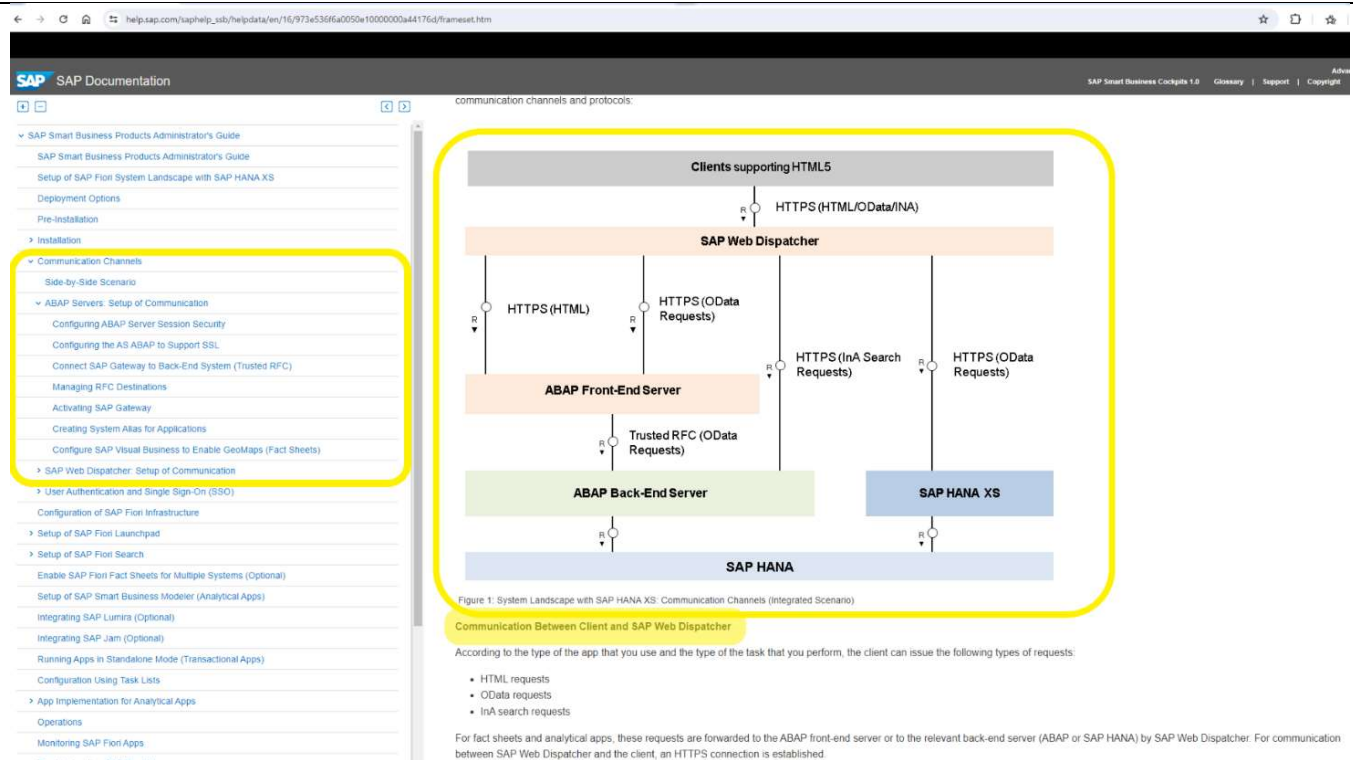
The Concept

SAP Fiori is the design language that brings great user experiences to enterprise applications based on SAP User Experience. It works seamlessly on desktops, tablets, and smartphones.

https://learning.sap.com/learning-journeys/learn-the-basics-of-sap-fiori/introducing-sap-fiori_c3915ced-ffd1-4127-a822-e217ff45fd72

The Accused Instrumentalities include software for communicating across a network. The excerpt below shows that “communication between the [user,] the front end, and the back end is established by using different communication channels and protocols” “[t]o transfer application data and security credentials within [the] SAP Fiori system landscape.”

https://help.sap.com/saphelp_ssb/helpdata/en/16/973e536f6a0050e10000000a44176d/frameset.htm



https://help.sap.com/saphelp_ssb/helpdata/en/16/973e536f6a0050e1000000a44176d/frameset.htm

The screenshot displays the SAP Documentation website. The browser address bar shows the URL: https://help.sap.com/saphelp_ssb/helpdata/en/16/973e536f6a0050e10000000a44176d/frameset.htm. The page header includes the SAP logo, "SAP Documentation", and navigation links for "SAP Smart Business Cockpits 1.0", "Glossary", "Support", "Copyright", and "Disclaimer".

The left sidebar contains a navigation menu with the following items:

- ▼ SAP Smart Business Products Administrator's Guide
 - SAP Smart Business Products Administrator's Guide
 - Setup of SAP Fiori System Landscape with SAP HANA XS
 - Deployment Options
 - Pre-Installation
 - Installation
 - ▼ Communication Channels
 - Side-by-Side Scenario
 - ▼ ABAP Servers: Setup of Communication
 - Configuring ABAP Server Session Security
 - Configuring the AS ABAP to Support

The main content area on the right contains the following text:

For communication between SAP Web Dispatcher and the ABAP servers, HTTPS connections are established.

Communication Between ABAP Front-End and ABAP Back-End Server

For transactional apps and fact sheets, data and services from the ABAP back-end server are provided to the ABAP front-end server by using OData services.

For communication between the ABAP front-end server and the ABAP back-end server, a trusted RFC connection is established.

Communication Between SAP Web Dispatcher and SAP HANA XS

For analytical apps, SAP Web Dispatcher forwards OData requests from the client to SAP HANA Extended Application Services (SAP HANA XS).

For communication between SAP Web Dispatcher and SAP HANA XS, an HTTPS connection is established.

Communication Between ABAP Back End and Map Provider

For fact sheets with integrated geographical maps, geographical coordinates and address data are transferred from the ABAP back-end server to the map provider using HTTP or HTTPS.

https://help.sap.com/saphelp_ssb/helpdata/en/16/973e536f6a0050e10000000a44176d/frameset.htm

Furthermore, the Accused Instrumentalities require the use of a hardware communication interface to connect to the internet and communicate with other systems. The Accused Instrumentalities include memory allocation in software, as well as hardware memory to store processor-executable instructions, as shown by the excerpt below:

SAP NW Installation Prerequisites

The minimum hardware requirements for SAP NetWeaver Gateway front-end server are as follows:

Requirements	Specification
Processor	Dual Core(2 logical CPUs) or higher, 2 GHz or higher
Random Access Memory (RAM)	8 GB or higher
Hard Disk Capacity	80 GB primary, or higher

See Page 10 of SAP Fiori tutorialspoint (<https://pdfcoffee.com/sap-fiori-pdf-free.html>)

The Accused Instrumentalities include one processor that executes the software instructions and allows communication with the user display device, as shown by the excerpt below. The processor allows display and interaction with the secure user information.

SAP NW Installation Prerequisites

The minimum hardware requirements for SAP NetWeaver Gateway front-end server are as follows:

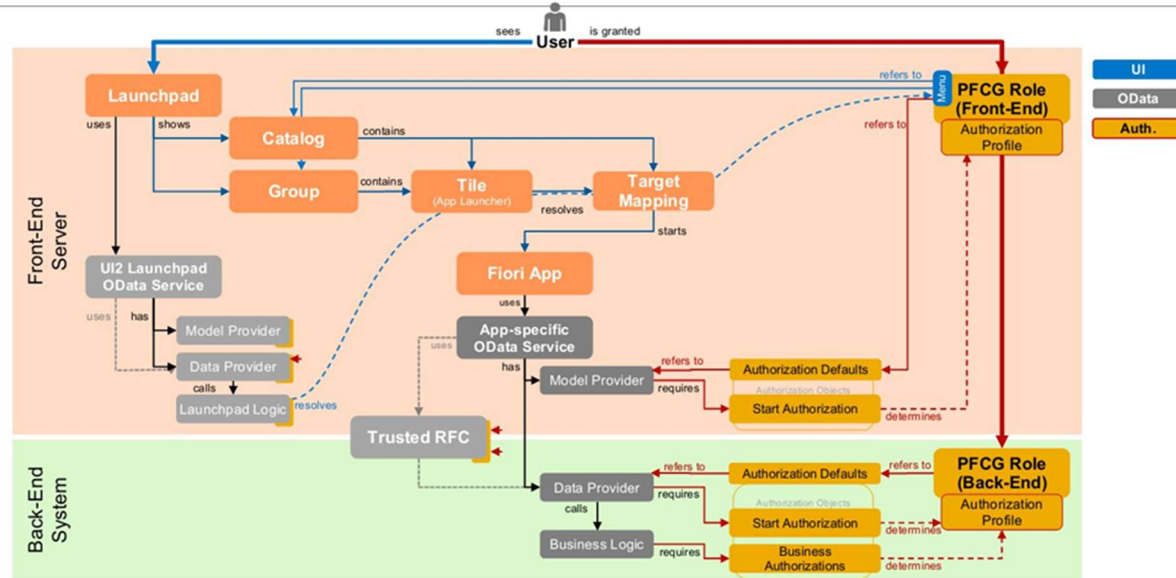
Requirements	Specification
Processor	Dual Core(2 logical CPUs) or higher, 2 GHz or higher
Random Access Memory (RAM)	8 GB or higher
Hard Disk Capacity	80 GB primary, or higher

	See Page 10 of SAP Fiori tutorialspoint (https://pdfcoffee.com/sap-fiori-pdf-free.html) As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendants make source code for the Accused Instrumentalities available for inspection.
33(f). the channel grid framework occupies a majority of the desktop;	See Claim 7. As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.
33(g). the channel grid framework includes a two-dimensional array of the users selectable items.	See Claim 6. As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.
33(h). the plurality of user-selectable items included in the channel grid framework is based at least in part on information access rights and/or security protocols respectively associated with the corresponding plurality of channels,	The application(s) included in the channel grid framework is based on the access rights and security protocols provided to the user corresponding to the user identity and platform identity, as shown by the excerpts below. The information transmitted for the applications in the Accused Instrumentalities is based on the user's profile information and automatically generated when the user logs into the system.

the user, and the user platform;

SAP Fiori Architecture

SAP Fiori launchpad - User Assignment and Authorizations of Content



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Public

21

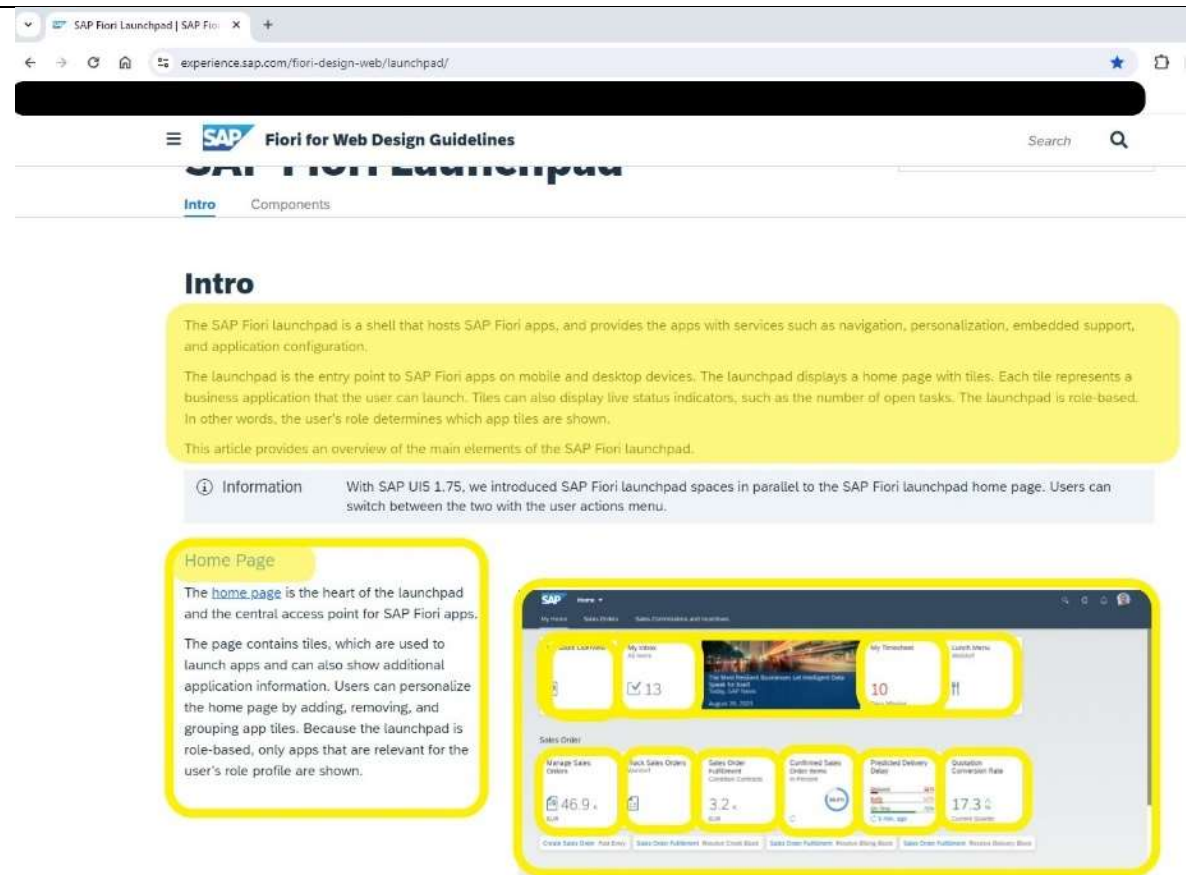
See page 21 of SAP Fiori User Experience – SAP S/4HANA – Version 4.1 – August 2016, [kupdf.net_sap-fiori-ux-architecture-for-s4h.pdf](https://kupdf.net/_sap-fiori-ux-architecture-for-s4h.pdf).

33(i). the plurality of authorized channels includes at least a first authorized channel through which the user receives and/or interacts with first authenticated

This information is displayed as a matrix of tiles and links that can individually be selected to launch the corresponding apps on the Launchpad.

Further, as shown by the excerpt below, SAP Fiori is a matrix of tiles and links that display and launch the corresponding apps on the Launchpad. Each of the links is a secure user-centric channel associated with an app, and that user's data can be sent to be displayed, and the user can interact with it.

channel information
constituting a first
portion of the secure
user-centric
information;



<https://experience.sap.com/fiori-design-web/launchpad/>

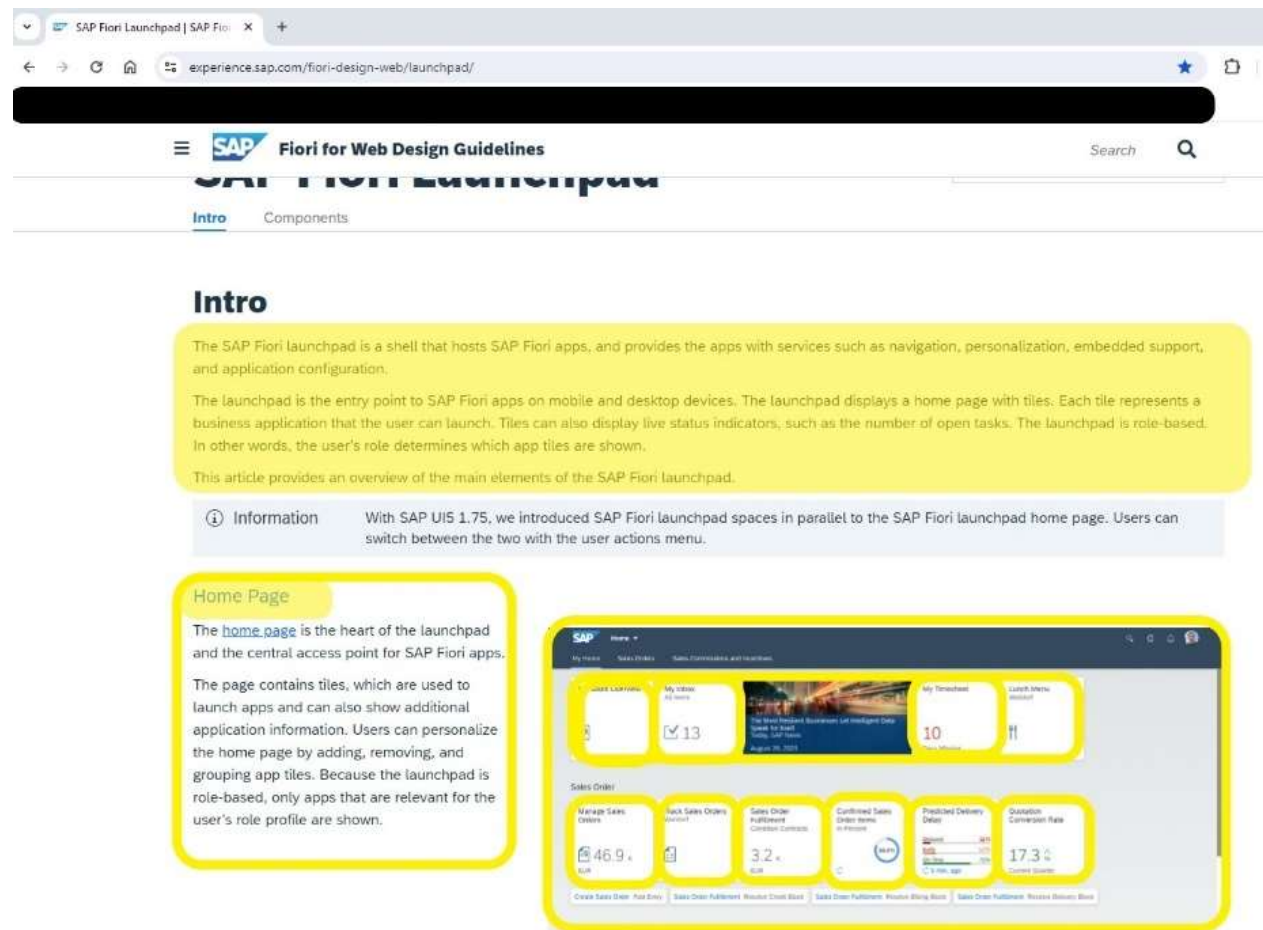
As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.

33(j). the first
authenticated
channel information

The Accused Instrumentalities include SAP Fiori, which allows users to access all relevant information, and such information is provided according to the user's authorized application(s), and access rights.

is provided by at least one authenticated channel application and/or at least one authenticated service;

Further, as shown by the excerpt below, SAP Fiori is a matrix of tiles and links that display and launch the corresponding apps on the Launchpad. Each of the links is a secure user-centric channel associated with an app, and that user's data can be sent to be displayed, and the user can interact with it.



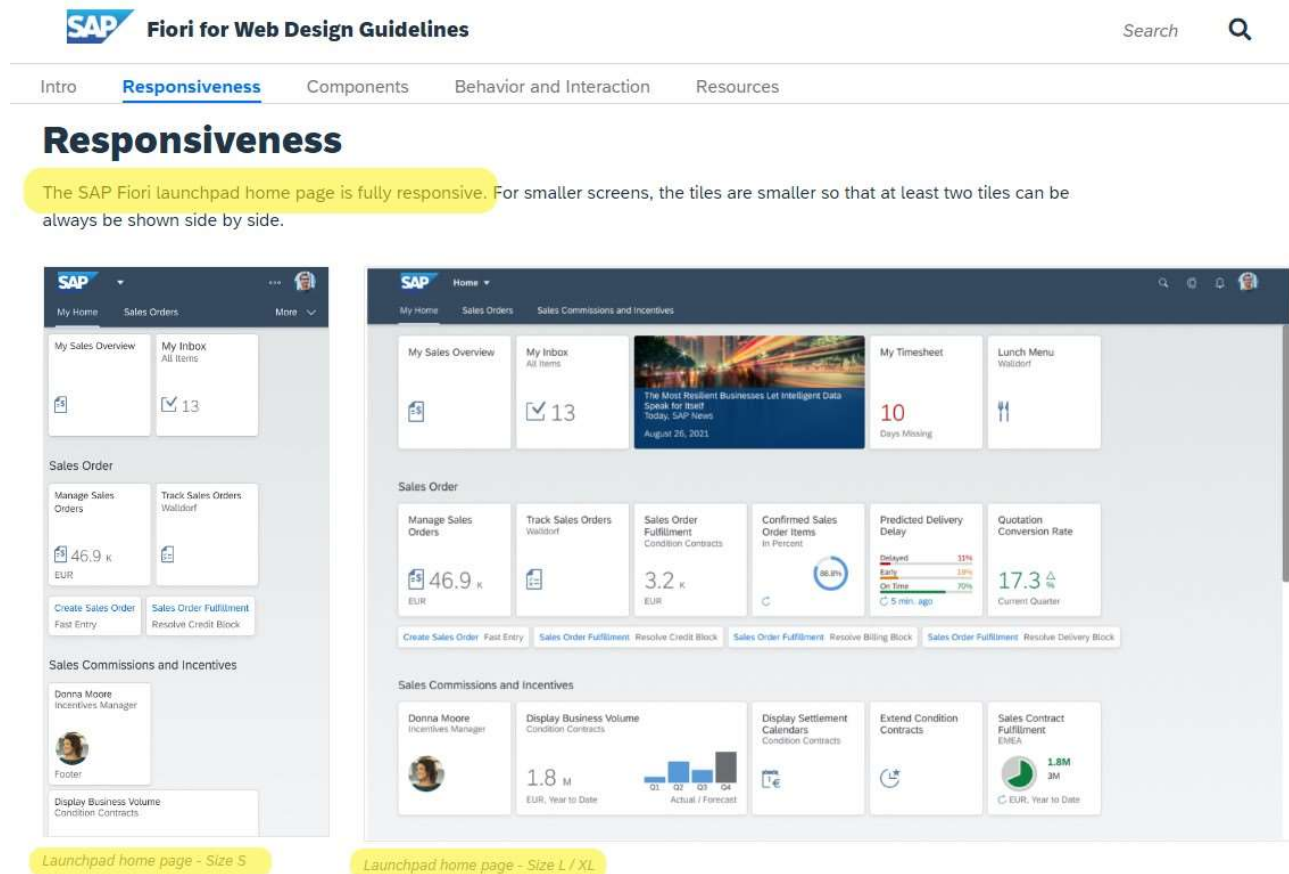
<https://experience.sap.com/fiori-design-web/launchpad/>

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.

33(k). the plurality of user-selectable items includes at least a first user-selectable item representing the first authorized channel;

The SAP Fiori is a matrix of tiles and links that display and launch the corresponding apps on the Launchpad. Each of the links is a secure user-centric channel associated with an app, and that user's data can be sent to be displayed, and the user can interact with it.

As shown below, these tiles display information and are selectable items specific to the user.



See pages 1-2 of SAP Fiori Launchpad Home Page, Updated on April 17, 2023,
<https://experience.sap.com/fiori-design-web/home-page/>.

Fiori for Web Design Guidelines

Search

Intro
Responsiveness
Components
Behavior and Interaction
Resources

Components

Tiles

The tiles provide direct access to apps or content. They are similar to large icons and have a rectangular shape.

The launchpad home page comes with a predefined set of groups and tiles. However, the user can also personalize the launchpad home page to reflect their individual roles by choosing from a wide range of ready-to-use tiles from the [app finder](#).

Tiles differ in the content they display. They can contain an icon, a title, some informative text, numbers, and charts. The information that is shown depends on the function of the tile or app.

The number of tiles visible on a page depends on the screen resolution. The tiles are placed below each other and are resized for smaller screens.

Different types of tiles

Links

Links are a different visual representation of a tile and always look the same; they consist of a title and an optional subtitle.

Links are collected in a dedicated area below the tiles area within each group. As with tiles, the user can modify the order of the links at any time.

Links are displayed inline, one after the other. If there is not enough space for the full link at the end of a row, the entire link moves to the next row. Links never break between rows.

Links

See pages 2-3 of SAP Fiori Launchpad Home Page, Updated on April 17, 2023,

<https://experience.sap.com/fiori-design-web/home-page/>.

As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.

33(l). the at least one processor is further configured to manage display of and interaction with the secure user-centric information by receiving configuration information from the user and transmitting the configuration information to at least one external computing device, wherein the configuration information is configured to cause the at least one external computing device to establish a user profile identifying user preferences, platform identities, and service support instructions that determine how the plurality of authorized channels behave on the user platform, wherein	See Claim 1(d)(b) starting with “receiving configuration information from the user . . .” Further, the process is configured to manage display of the relevant secured information to the user. As described above, this element’s functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.
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the at least one external computing device is configured to synchronize functions and features of one or more of the plurality of channels across a plurality of user platforms by deploying secure user-centric information to the plurality of user platforms;	
33(m). at least a portion of the user-centric information provided to the user through the plurality of authorized channels is based at least in part on information access rights and/or security protocols respectively associated with the corresponding plurality of authorized channels the user and the user	See Claim 1(e) starting with “wherein at least a portion of the user-centric information provided to the user through the plurality of authorized channels is based at least in part on information access rights and/or security protocols . . .” As described above, this element’s functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.

platform, and wherein at least a portion of the user-centric information provided to the user through the plurality of authorized channels is based at least in part on the user profile and is provided to the user without being requested by the user; and	
33(n). at least a portion of the secure user-centric information provided to the user through the plurality of authorized channels is received based in part on a bi-directional interrogation of one or more of the plurality of authorized channels, wherein the bi-directional interrogation comprises the one or	See Claim 1(f) starting with “wherein at least a portion of the secure user-centric information provided to the user through the plurality of authorized channels is received based in part on a bi-directional interrogation of one or more of the plurality of authorized channels . . .” As described above, this element’s functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.

more of the plurality of authorized channels interrogating an identity management server, and wherein the bi-directional interrogation further comprises the identity management server and a web services gateway interrogating the one or more of the plurality of authorized channels, wherein the web services gateway is a tool through which the channel grid framework interacts with the identity management server.	
'641 Patent Claim 34	
34. The apparatus of claim 1, wherein the one or more of the plurality of authorized channels interrogating the identity management	See Claim 1. See Claim 1(f) starting with “wherein at least a portion of the secure user-centric information provided to the user through the plurality of authorized channels is received based in part on a bi-directional interrogation of one or more of the plurality of authorized channels . . .”

server comprises the one or more of the plurality of authorized channels evaluating content provided by the identity management server and determining if services of the one or more of the plurality of authorized channels are available, and wherein the identity management server and the web services gateway interrogating the one or more of the plurality of authorized channels comprises the identity management server evaluating content provided by the one or more of the plurality of authorized channels.	As described above, this element's functions may be performed through software in the Accused Instrumentalities. As such, Cyandia reserves the right to supplement its response once Defendant makes source code for the Accused Instrumentalities available for inspection.
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