

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

CYANDIA, INC.,)	
)	
Plaintiff,)	Civil Action No.
)	
v.)	DEMAND FOR JURY TRIAL
)	
SAP AMERICA, INC. and SAP SE,)	
)	
Defendants.)	
)	

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Cyandia, Inc. (“Cyandia”) files this Complaint for Patent Infringement and Demand for Jury Trial against defendants SAP America, Inc. and SAP SE (collectively “Defendants” or “SAP”) and alleges as follows:

THE PARTIES

1. Plaintiff Cyandia is a corporation organized under the laws of the state of Delaware with its principal place of business at P.O. Box 539, Boca Grande, Florida, 33921.
2. Upon information and belief, Defendant SAP America, Inc. is a Delaware corporation with its principal place of business at 3999 West Chester Pike, Newtown Square, PA, 19073-2305. SAP America, Inc. is wholly owned subsidiary of SAP SE.
3. Upon information and belief, Defendant SAP SE is a German company with its principal place of business at Dietmar-Hopp-Allee 16, Walldorf, Germany, 69190.
4. SAP regularly conducts and transacts business in Texas, throughout the United States, and within the Eastern District of Texas, and as set forth below, has committed and continues to commit tortious acts of patent infringement within the Eastern District of Texas. SAP maintains a regular and established place of business in this District through a

permanent physical facility located at 7500 Windrose Avenue Suite 250, Plano, TX 75024. Further, SAP directly or indirectly uses, distributes, markets, sells, and/or offers to sell throughout the United States, including in this judicial district, various software products and services, including but not limited to, the products based on SAP's Fiori technology, including the SAP Fiori User Experience (UX) platform and the SAP Fiori launchpad and applications (the "Accused Products"). SAP may be served through its registered agent CT Corporation System, located at 1999 Bryan Street, Suite 900, Dallas, Texas 75201-3136. SAP regularly and continuously does business in this District and has infringed, induced infringement, and continues to do so, in this District. On information and belief, SAP provides systems, applications, websites and/or services to residents in this District.

JURISDICTION AND VENUE

5. This action for patent infringement arises under the patent laws of the United States, 35 U.S.C. § 101 *et seq.* This Court has original jurisdiction over this controversy pursuant to 28 U.S.C. §§ 1331 and 1338.

6. This Court has personal jurisdiction over SAP because SAP has conducted and continues to conduct business within the State of Texas, and has engaged in continuous and systematic activities in the State of Texas, including within this District. SAP maintains a regular and established place of business in this District through offices located at 7500 Windrose Avenue Suite 250, Plano, TX 75024. SAP, directly or through subsidiaries or intermediaries (including distributors, retailers, and others), ships, distributes, offers for sale, sells, and advertises (including by publishing an interactive web page in this District) its products and/or services in the Eastern District of Texas, the State of Texas, and the United States.

7. SAP, directly and through subsidiaries or intermediaries including distributors, retailers, and others, has purposefully and voluntarily placed one or more of its infringing products and/or services, as described below, into the stream of commerce with the expectation that they will be purchased and used by consumers in the Eastern District of Texas. These infringing products and/or services have been and continue to be purchased and used by consumers in the Eastern District of Texas. SAP has committed acts of patent infringement within the State of Texas and, more particularly, within the Eastern District of Texas. In addition, the Court has personal jurisdiction over SAP because it has established minimum contacts with the forum such that the exercise of jurisdiction would not offend traditional notions of fair play and substantial justice. For example, SAP has an active office in this District and has recently advertised job listings in the city of Plano, including job listings for developers and engineers, and makes, uses, offers for sale, and sells products or services that infringe the Asserted Patents in this District, as further described below.

8. Venue is proper in the Eastern District of Texas under 28 U.S.C. §§ 1391(b) and (c) and/or 1400(b). SAP has transacted business in this District, has a regular and established place of business in this District, and has infringed and induced infringement in this District, and continues to do so. SAP maintains a regular and established place of business in this District described above. Cyandia is informed and believes that SAP employs a number of personnel in this District, including personnel involved in SAP's infringement by at least through the testing, demonstration, support, use, offer for sale, and sale of the Accused Products and services within Texas.

CYANDIA’S INNOVATIONS AND ASSERTED PATENTS

9. Cyandia was founded in 2011 and is a Delaware private company in the software industry, with a core mission to provide an Experience Delivery Platform, particularly to users interacting with data in a business environment (such as healthcare, finance, and home security), involving complex and cross platform information management solutions.

10. Michael Wetzer is the CEO and owner of Cyandia, Inc. and co-inventor of the Asserted Patents (“U.S. Patent Nos. 8,499,250; 8,578, 285; 8,595,641; 8,751,948”).

11. Cyandia developed novel technologies relevant to the distributed computer field. A common problem in the industry was devices, platforms, data and applications being operated in a “silo” where data could not flow between these components depending on the user, the media or content type, or the location of use. The technology at issue solves this problem with specific implementation of a computer grid architecture that allows data to be used and generated in new ways.

12. On July 30, 2013, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,499,250 (the “‘250 Patent”), entitled “Apparatus and methods for interacting with multiple information forms across multiple types of computing devices.” A true and correct copy of the ‘250 Patent is attached hereto as Exhibit 1. The ‘250 Patent was filed on May 13, 2009 and claims priority to provisional patent application no. 61/052,765, filed May 13, 2008 (the, “‘765 Provisional”). *Id.* at Cover.

13. The ‘250 Patent lists Michael Wetzer, Thomas Theriault, Mark Dingman, and Rupert Key as its inventors.

14. Cyandia owns the entire right, title, and interest in and to the ‘250 Patent.

15. The '250 Patent discloses and specifically claims inventive concepts that represent significant improvements over previous systems because it provides a system in which users may define the type and manner of delivery of information. Information may be delivered to a user based on the user's identity as established by the system when the user's session is established. *See, e.g.*, Ex. 1 at 1:18-2:37. One of the ways this is accomplished is with a computer-readable storage media, which may include computer-readable instructions configured to cause one or more computer processors to execute specific operations. *See id.* at 2:9-27. Prior systems did not utilize a distributed computing architecture to cause content to be available in a variety of formats and manipulated to be accessible on a variety of devices. Further, dissimilar formats compounded with increasing amounts of digital content were overwhelming users with data, who would waste their time locating, putting into context, consolidating, managing multiple versions of, and understanding what was truly meaningful. *Id.*

16. On November 5, 2013, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,578,285 (the "'285 Patent"), entitled "Methods, apparatus and systems for providing secure information via multiple authorized channels to authenticated users and user devices." A true and correct copy of the '285 Patent is attached hereto as Exhibit 2. The '285 Patent is a continuation of the '250 Patent and claims priority to the '765 Provisional. *Id.* at Cover.

17. The '285 Patent lists Michael Wetzer, and Thomas Theriault as its inventors.

18. Cyandia owns the entire right, title, and interest in and to the '285 Patent.

19. The '285 Patent discloses and specifically claims inventive concepts that represent significant improvements over previous systems because it provides a secure user-

centric information that allows multiple channels to be configured and implemented across a variety of platforms through which information relevant to a given user is presented for user interaction via one or more user platforms associated with the user. *Id.* A user profile is established identifying user preferences and one or more platform identifies. The user profile is managed to grant the user access to specific ones of the multiple channels. *Id.*

20. On November 26, 2013, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,595,641 (the “‘641 Patent”), entitled “Methods, apparatus and systems for displaying and/or facilitating interaction with secure information via channel grid framework.” A true and correct copy of the ‘641 Patent is attached hereto as Exhibit 3. The ‘641 Patent is a continuation of the ‘250 Patent and claims priority to the ‘765 Provisional. *Id.* at Cover.

21. The ‘641 Patent lists Michael Wetzer, and Thomas Theriault as its inventors.

22. Cyandia owns the entire right, title, and interest in and to the ‘641 Patent.

23. The ‘641 Patent discloses and specifically claims inventive concepts in which a user desktop is displayed on a display device of the user platform as a channel grid framework that includes 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. 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 user, and the user platform.

24. On June 10, 2014, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,751,948 (the “‘948 Patent”), entitled “Methods, apparatus and

systems for providing and monitoring secure information via multiple authorized channels and generating alerts relating to same.” A true and correct copy of the ‘948 Patent is attached hereto as Exhibit 4. The ‘948 Patent is a continuation-on-part of the ‘250 Patent and claims priority to the ‘765 Provisional, provisional patent application no. 61/474,942, filed on April 13, 2011, and provisional patent application no. 61/435,976, filed on January 25, 2011. *Id.* at Cover.

25. The ‘948 Patent lists Michael Wetzer, and Thomas Theriault as its inventors.

26. Cyandia owns the entire right, title, and interest in and to the ‘948 Patent.

27. The ‘948 Patent discloses and specifically claims inventive concepts that represent significant improvements over previous systems because it provides and monitors secure information via multiple authorized channels, which allows a user to determine particular aspects, trends, and/or values associated with the information, and generating alerts relating to same as well as the display of and access to secure user-centric information provided via the construct of a channel grid framework serving as a desktop on one or more user devices. Ex. 4 (‘948 Patent) at 1:37-62; 10:56-62. Multiple authorized channels represented in the channel grid framework, and through which the user receives and/or interacts with respective portions of the secure user-centric information, are implemented based on information access rights and/or security protocols respectively associated with the channels. *Id.*

28. One of ordinary skill in the art understands that the claims of the Asserted Patents are not abstract, and contain inventive concepts. At the time of the invention, consumers had a problem meaningfully understanding and efficiently consuming the vast amount of content. *See, e.g.,* Ex. 1 (‘250 Patent) at 3:36-38; *see also* Ex. 2 (‘285 Patent) at

3:46-48; Ex. 3 ('641 Patent) at 3:46-48; Ex. 4 ('948 Patent) at 10:56-62. Indeed, dissimilar formats compounded with increasing amounts of digital content were overwhelming users with data. Information users were at the time wasting their time locating, putting into context, consolidating, managing multiple versions of, and understanding what is truly meaningful. Users then spent insufficient time contemplating contexts, and acting on the information. Inefficiency was increasing and productivity declining. *See, e.g.*, Ex. 1 ('250 Patent) at 3:34-48; *see also* Ex. 2 ('285 Patent) at 3:44-48; Ex. 3 ('641 Patent) at 3:44-48; Ex. 4 ('948 Patent) at 1:37-47. Specifically, dissimilar evolutions of device interfaces on platforms such as computer desktop/laptop screens, mobile devices, and special use displays have created many content interaction metaphors. Users have had to accept that these different physical devices require expertise in each format to make them useful. *See, e.g.*, Ex. 1 ('250 Patent) at 1:30-37; *see also* Ex. 2 ('250 Patent) at 1:39-47; Ex. 3 ('641 Patent) at 1:39-47; Ex. 4 ('948 Patent) at 1:43-46. As such, "similar content [could] be accessed from dissimilar devices with different access methods and metaphors." *See, e.g.*, Ex. 1 ('250 Patent) at 1:35-37; *see also* Ex. 2 ('285 Patent) at 1:45-47; Ex. 3 ('641 Patent) at 1:45-47. As no other technologies (such as browsers, consumer interface technologies, and 3D data visualization) could resolve this particular issue, "there [was] a need for a solution that addresses the above [issue] and other problems." *See, e.g.*, Ex. 1 ('250 Patent) at 1:61-62; *see also* Ex. 2 ('285 Patent) at 2:4-5; Ex. 3 ('641 Patent) at 2:4-5.

29. The Asserted Patents each resolve the problem, which is to provide a distributed computing method, and computer program product for interacting with multiple information forms across multiple types of computing devices, without the shortcomings of previous systems. *See, e.g.*, Ex. 1 ('250 Patent) at 1:66-2:3; *see also* Ex. 2 ('285 Patent) at 2:9-13; Ex. 3

(‘641 Patent) at 2:9-13. These systems solve the problem with siloed data by providing a novel computing architecture grid channel, while also enforcing specific authorization and security rights on the user of the system. The types of systems shown cannot be made using standard commercial hardware and software, but instead require specialized systems that perform these functions that are set forth with specificity in the claims.

30. In traditional systems, profile configurations, authentication, and security requirements, as well as dissimilar formats of data prevented or hampered the ability to efficiently use different applications or data in interoperable systems. In particular, the vast amounts of data that are currently being generated by many different users, in many different systems and applications, and at many different locations or points in time, would hamper the ability of the systems to be used. Users were typically required to work across different business and/or personal systems in a nonintegrated and inefficient manner. The ‘250 Patent solves these problems with a specialized channel grid framework system set forth in the claims, which uses novel and inventive configuration of physical components managed by software. The unique and inventive channel grid system in the claim allows for the management that authenticates the users to use specific data and applications in a manner that was not previously possible by providing multiple authenticated platforms in a channel grid framework with authentication, security, and drag and drop operation functionality, all performed together in a user-centric manner using a user profile. Thus, for example, Claim 1 of the ‘250 Patent does not describe generic computer components, but rather particular, specialized pieces of a computer system and assigns particular functionality within the channel grid system, which went beyond what was available before the priority date of the ‘250 Patent. The system described by Claim 1 of the ‘250 Patent, for example, also provides specific improvement into

managing platforms through a channel grid framework, which allows for improved efficiency in the computer system by managing workflow and data in an unconventional manner. Claim 1 of the '250 Patent also describes how the components all work together in a manner that benefits the efficiency of the computer systems and the users of the systems, by creating in the integrated grid channel a framework that includes user centric functionality for managing multiple channels and authentication and security provisions.

31. Claim 1 of the '250 Patent provides an inventive concept because it provides a novel and unconventional use for managing multiple different platforms in a grid channel system with user-centric functionality with drag and drop functionality for different channels, while also maintaining information for authentication and security. This goes beyond what was available at the priority date of the patent, which included non-integrated systems that did not use a grid channel framework to manage authentication and security issues.

32. The dependent claims of the '250 Patent provide specific concrete implementation details and further establish what is claimed goes well beyond what was known. For example, Claim 2 describes specific applications of modifying the grid channel framework with the drag and drop operation. Claim 3 describes further implementation details and functionality of a channel in the grid channel framework, whereby the applications are launched in the grid channel framework and include additional specific data types and update implementation details. Claims 5 and 7 include specific implementation details for the platforms that are used within the grid channel framework. Claim 6 describes specific implementation details for the graphical representation on a platform and specific functionality for modifying the channel grid framework. Claim 8 includes specific implementation details on how information is collected for interrogation of the channel. Claim 9 describes specific

implementation detail on alert functionality that is provided that is intelligent in nature, going beyond a traditional alert and specific conditions for these alerts. All these functions are performed by an unconventional solution that goes well beyond what was in the prior art.

33. There are no preemption concerns because, for example, Claim 1 of the '250 Patent discloses a specific and specialized system with specific components, such as the channel grid framework, for improved operation of disparate computer systems and their use by a user. Claim 1 of the '250 Patent does not foreclose all use of disparate systems by a user because it uses it in a specialized component, in a specific way, as discussed above.

34. All the claims of the '250 Patent are not abstract and contain inventive concepts for the same reasons discussed above, although all of the claims have different scope, as ascertainable in the different language used for each of the claims.

35. In traditional systems, profile configurations, authentication, and security requirements, as well as dissimilar formats of data prevented or hampered the ability to efficiently use different applications or data in interoperable systems. In particular, the vast amounts of data that are currently being generated by many different users, in many different systems and applications, and at many different locations or points in time, would hamper the ability of the systems to be used. Users were typically required to work across different business systems in a nonintegrated and inefficient manner. The '285 Patent solves these problems with a specialized channel grid framework system, which uses a novel and inventive configuration of components managed by software. The unique and inventive channel grid system allows for the provision of secure user-centric information in a manner that was not previously possible by providing multiple authenticated platforms in a channel grid framework with authentication and bi-directional interrogation security for identity management, which is

performed together in a user-centric manner using a user profile based on a bi-directional interrogation server interaction in furtherance of information access rights and/or security protocols. Thus Claim 37 of the '285 Patent, for example, does not describe merely performing a method on generic computer components, but rather it relates to technology that only exists in the realms of computers and uses specialized pieces of a computer system and assigns particular functionality within the channel grid system, which went beyond what was available before the priority date of the '250 Patent. The method described by Claim 37 of the '285 Patent also provides specific improvement into managing platforms through a channel grid framework, which provides an unconventional computer system by managing workflow and data in a new manner. Further, Claim 37 of the '285 Patent also describes how the components all work together in a manner that benefits the efficiency of the computer systems and the security of the users of the systems, created in the integrated grid channel framework that includes user centric functionality for managing multiple channels and authentication and security provisions.

36. Claim 37 of the '285 Patent provides an inventive concept because it provides a novel and unconventional use for providing secure user-centric information via multiple different platforms in a grid channel system through bi-directional interrogation security for identity management. This goes beyond what was available at the priority date of the patent, which included numerous non-integrated systems that did not use a grid channel framework to manage issues for authentication, security, with features such as bi-directional interrogation security for identity management to manage secure user-centric information in different channels in a user-centric manner.

37. The dependent claims of the '285 Patent provide specific concrete implementation details and further establish what is claimed goes well beyond what was known. For example, Claim 38 describes specific applications of authentication with regard to modifying the grid channel framework, by establishing the user profile as part of an authentication directory. Claims 39 and 40 and 41 provide further implementation details and functionality of a channel in the grid channel framework, describing what authentication of the user identity entails with regard to entry type. All these functions are performed by an unconventional solution that goes well beyond what was in the prior art.

38. There are no preemption concerns because, for example, Claim 37 discloses a method for a specific and specialized system with specific components, such as the channel grid framework, for improved operation of disparate computer systems and their use by a user.

39. All the claims of the '285 Patent are not abstract and contain inventive concepts for the same reasons discussed above, although all of the claims have different scope, as ascertainable in the different language used for each of the claims.

40. In traditional systems, profile configurations, authentication, and security requirements, as well as dissimilar formats of data prevented or hampered the ability to efficiently use different applications or data in interoperable systems. In particular, the vast amounts of data that are currently being generated by many different users, in many different systems and applications, and at many different locations or points in time, would hamper the ability of the systems to be used. Users were typically required to work across different business systems in a nonintegrated and inefficient manner. The '641 Patent solves these problems with a specialized channel grid framework system, which uses a novel and inventive configuration of physical components managed by software. The unique and inventive channel

grid system in the claim allows for the display and provision of secure user-centric information in a manner that was not previously possible by providing multiple authenticated platforms in a channel grid framework with authentication and bi-directional interrogation security for identity management, which is all performed together in a user-centric manner using a user profile based on a bi-directional interrogation server interaction in furtherance of information access rights and/or security protocols. Thus Claim 1 of the '641 Patent does not describe merely performing a method on generic computer components, but rather it relates to technology that only exists in the realms of computers and uses specialized pieces of a computer system and assigns particular functionality within the channel grid system, which went beyond what was available before the priority date of the '641 Patent. The apparatus described by Claim 1 of the '641 Patent also provides specific improvement into managing platforms through a channel grid framework, which allows for improved efficiency in the computer system by managing workflow and data in an unconventional manner. Further, Claim 1 of the '641 Patent also describes how the components all work together in a manner that benefits the efficiency of the computer systems and the security of the users of the systems, created in the integrated grid channel framework that includes user centric functionality for managing multiple channels, facilitating display, and authentication and security provisions.

41. Claim 1 of the '641 Patent provides an inventive concept because it provides a novel and unconventional use for providing an apparatus serving as a user platform to facilitate display of and interaction with secure user-centric information via multiple different platforms in a grid channel system through bi-directional interrogation security for identity management. This goes beyond what was available at the priority date of the patent, which included

numerous non-integrated systems that did not use a grid channel framework as set forth in the claims to manage issues for authentication, security, with features such as bi-directional interrogation security for identity management to manage displayable secure user-centric information in different channels in a user-centric manner.

42. The dependent claims of the '641 Patent provide specific concrete implementation details and further establish what is claimed goes well beyond what was known. For example, Claim 3 describes specific user platforms with respect to the user platform apparatus. Claim 4 further specifies implementation details where the secure user-centric information to consist of at least one of different types of data. All these functions are performed by an unconventional solution that goes well beyond what was in the prior art.

43. There are no preemption concerns because, for example, Claim 1 of the '641 Patent discloses an apparatus serving as a user platform operated by a user to facilitate display of and interaction with secure user-centric information performed by a specific and specialized system with specific components, such as the channel grid framework, for improved operation of disparate computer systems and their use by a user. Claim 1 does not foreclose all use of disparate systems by a user because it uses it in a specialized component, in a specific way, as discussed above.

44. All the claims of the '641 Patent are not abstract and contain inventive concepts for the same reasons discussed above, although all of the claims have different scope, as ascertainable in the different language used for each of the claims.

45. In traditional systems, profile configurations, as well as dissimilar formats of data prevented or hampered the ability to efficiently use different applications or data in interoperable systems. In particular, the vast amounts of data that are currently being

generated by many different users, in many different systems and applications, and at many different locations or points in time, would hamper the ability of the systems to be used. Users were typically required to work across different business systems in a nonintegrated and inefficient manner. This meant that the users' experience with digital content over different devices was impacted and poor for at least 2 reasons, (1) the quality of the information varied and (2) users are required to learn how to use each device in order to receive their desired information. Therefore, users' experience was time consuming and did not guarantee the users' success. The '948 Patent solves these problems with a specialized channel grid framework system, which uses novel and inventive configuration of components managed by software. The unique and inventive channel grid system allows for the transmission of secure information to the users by providing a method for evaluating the information to be transmitted, generating and transmitting alerts regarding this information based on the users' preferences using a novel computer architecture. Thus, Claim 35 of the '948 Patent does not describe generic computer components, but rather particular, specialized pieces of a computer system and assigns particular functionality within the channel grid system, which went beyond what was available before the priority date of the '948 Patent. The method described by Claim 35 of the '948 Patent also provides specific improvement into managing platforms through a channel grid framework, which allows for improved efficiency in the computer system by focusing on delivering personalized data based on the users' interactions with the channel grid framework and transmitting it in a better manner via alerts, and without the users requesting it using a distributed computing platform. Further, Claim 35 of the '948 Patent also describes how the components all work together in a manner that benefits the efficiency of the computer systems and the users of the systems, created in the integrated grid channel framework that

includes a notification method by which to provide an alert to the users, and electronically transmitting this alert or data to the users, without the latter requesting it, based on the users' interactions with the channel grid framework in the distributed computing platform.

SAP AND THE ACCUSED PRODUCTS

46. Systems, Applications, and Products in Data Processing (“SAP”) is a German multinational software company known for developing and selling enterprise software solutions. They offer a range of products, including Enterprise Resource Planning (“ERP”) systems, business intelligence tools, and cloud-based applications to help organizations streamline processes and manage various aspects of their business (*e.g.*, financial, human resources and customer relations) effectively.

47. SAP makes, uses, sells, and/or offers for sale in the United States various software products and services, including products using the Fiori technology, which includes but is not limited to the SAP Fiori User Experience (UX) platform (“SAP Fiori”) and includes features such as a collection of role-based, responsive, and personalized applications (the “SAP Fiori applications”) and the SAP Fiori launchpad (collectively, the “Accused Products”), all of which infringe each of the Asserted Patents as described in further detail below.

48. SAP Fiori is aimed at transforming complex business processes into intuitive and easy-to-understand user interfaces. By using modern design and technologies, SAP Fiori is designed to enhance productivity, enable self-service and allow users to quickly and efficiently make informed decisions.

49. The SAP Fiori applications include 300+ role-based applications, allowing the company to have as many roles as the company needs and the ability to grant each role a different level of permission based on the work that each individual or group does.

50. SAP Fiori enables the simultaneous use of multiple device applications that allows users to create a user-centric system and start a process on their desktop/laptops and to continue that process on a smartphone or on a tablet.

SAP Fiori is a new user experience (UX) for SAP software and applications. It provides a set of applications that are used in regular business functions like work approvals, financial apps, calculation apps and various self-service apps.

SAP Fiori provides 300+ role-based applications like HR, Manufacturing, finance, etc. When you open the SAP Fiori home page application, you will see a picture of the flowers. It is because Fiori means 'flowers' in Italian.



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.

See, e.g., Ex. 5 at 1, https://www.tutorialspoint.com/sap_fiori/sap_fiori_tutorial.pdf; see also Ex. 12 at 1, https://www.tutorialspoint.com/sap_fiori/sap_fiori_introduction.htm.

51. The SAP Fiori applications are built using responsive design techniques so that they can be used seamlessly on various screen sizes and resolutions, including smartphones, tablets, or desktops.

52. The SAP Fiori Launchpad is the entry point to the SAP Fiori applications, providing a single point of access to all the applications that a user has permission to use on any device. *Id.*

53. The SAP Fiori Launchpad displays a predefined set of groups, tiles and links that allow the user to launch and run the SAP Fiori applications. The Launchpad can be

personalized based on the applications that the user is authorized to use and applications can be added, removed, or bundled in groups. *See, e.g.*, Ex. 6, <https://experience.sap.com/fiori-design-web/tile/#>.

54. SAP has had knowledge of the Asserted Patents since at least 2018, as Cyandia gave SAP actual notice of the Asserted Patents. Further Cyandia gave SAP notice of the Asserted Patents on February 7, 2024. Ex. 7.

FIRST CAUSE OF ACTION
(Direct Infringement of the ‘250 Patent pursuant to 35 U.S.C. § 271(a))

55. Cyandia repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.

56. SAP has infringed and continues to infringe claims of the ‘250 Patent, including Claims 1, 2, 3, 5, 6, 7, 8, 9, in violation of 35 U.S.C. § 271(a).

57. SAP’s infringement is based upon literal infringement or infringement under the doctrine of equivalents, or both.

58. SAP’s acts of making, using, importing, selling, and/or offering for sale infringing products and services have been without the permission, consent, authorization, or license of Cyandia.

59. SAP’s infringement includes, but is not limited to, the manufacture, use, sale, importation and/or offer for sale of products and services incorporating Cyandia’s technology covered by the ‘250 Patent, including, but not limited to, products and services, such as the SAP Fiori User Experience (UX) platform, offering the SAP Fiori launchpad and applications (the “‘250 Accused Products”). The ‘250 Accused Products embody the patent invention of the ‘250 Patent and infringe the ‘250 Patent because they utilize a combination of features that collectively practiced each limitation of claim 1 of the ‘250 Patent. SAP is responsible for

sales, marketing, distribution related to its infringing products and services, the SAP Fiori User Experience (UX) platform for SAP software and applications. In particular, the SAP Fiori launchpad feature provides a set of multiple applications that are used in regular business functions, that allows users to interact with multiple information forms across multiple types of computing devices and platforms, including but not limited to, various smartphones, tablets, laptops, or desktop computers.

SAP Fiori



See Ex. 5 at 2, https://www.tutorialspoint.com/sap_fiori/sap_fiori_tutorial.pdf.

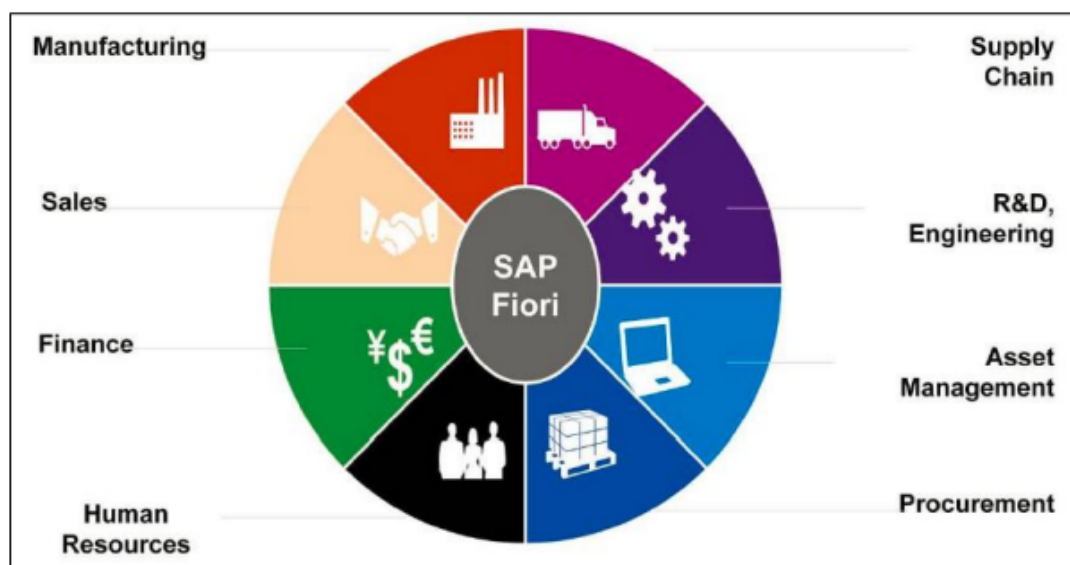
60. The Fiori launchpad is based on some architectural principles, including but not limited to:

- a Central Access to applications through the SAP Fiori launchpad:

1. SAP Fiori – Introduction

SAP Fiori is a new user experience (UX) for SAP software and applications. It provides a set of applications that are used in regular business functions like work approvals, financial apps, calculation apps and various self-service apps.

SAP Fiori provides 300+ role-based applications like HR, Manufacturing, finance, etc. When you open the SAP Fiori home page application, you will see a picture of the flowers. It is because Fiori means 'flowers' in Italian.



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.

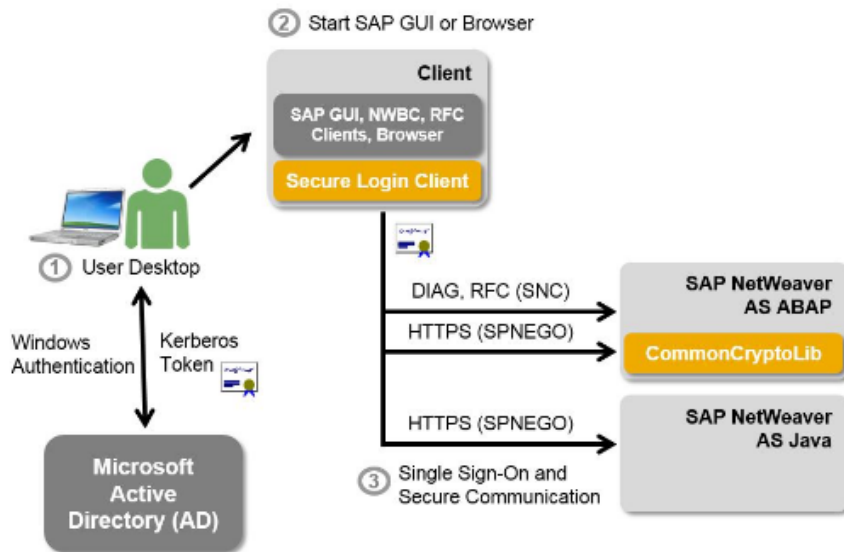
SAP Fiori enables multiple device applications that allow users to start a process on their desktop/laptops and to continue that process on a smartphone or on a tablet. SAP has developed Fiori Apps based on User interface UI5.

See Ex. 5 at 1, https://www.tutorialspoint.com/sap_fiori/sap_fiori_tutorial.pdf.

- a Security with Single Sign-On (SSO) as well as role-based authentication and authorization – see below examples of Authentication Methods.

(1) Spnego /Kerberos:

Single Sign-On Based on Kerberos / SPNEGO

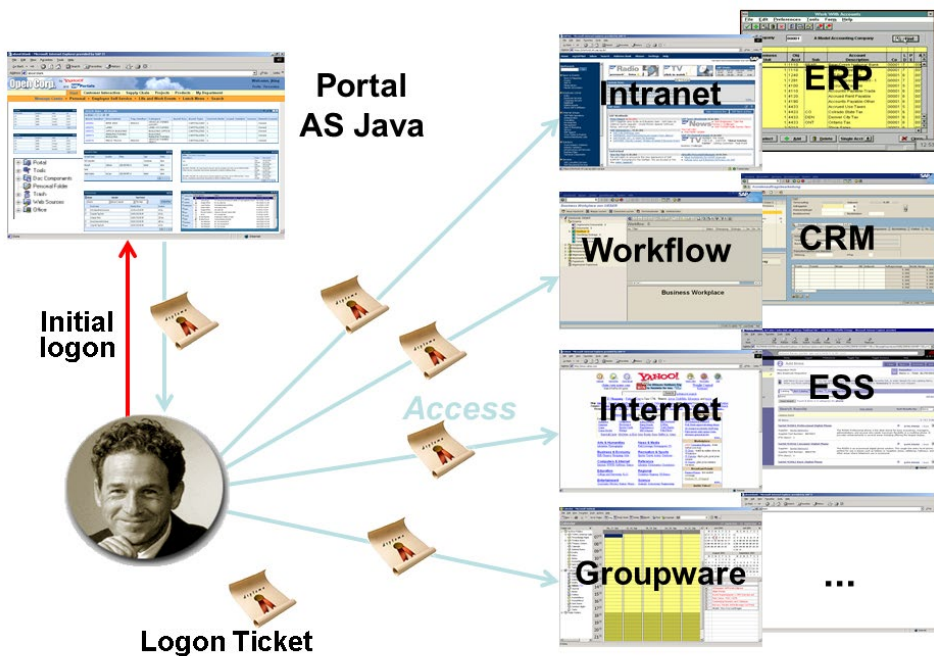


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See Ex. 8, <https://community.sap.com/t5/technology-blogs-by-sap/sap-single-sign-on-authenticate-with-kerberos-spnego/ba-p/13321445>.

(2) SAP Logon Tickets:

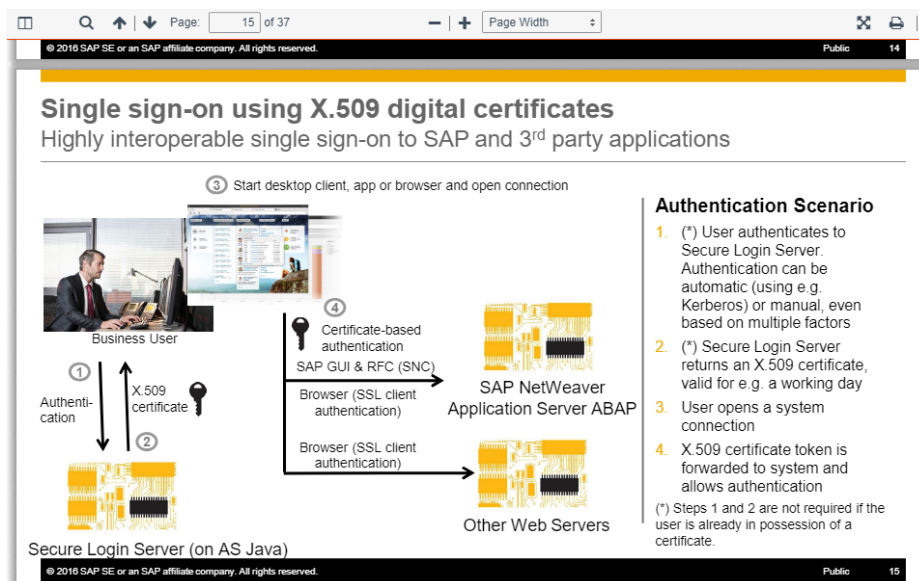
For an overview of the authentication process when using logon tickets, see the figure below.



See Ex. 9 at 2,

https://help.sap.com/saphelp_ewm900/helpdata/en/43/9d7bb1e08021b5e10000000a1553f6/content.htm?no_cache=true.

(3) X.509 Certificates:



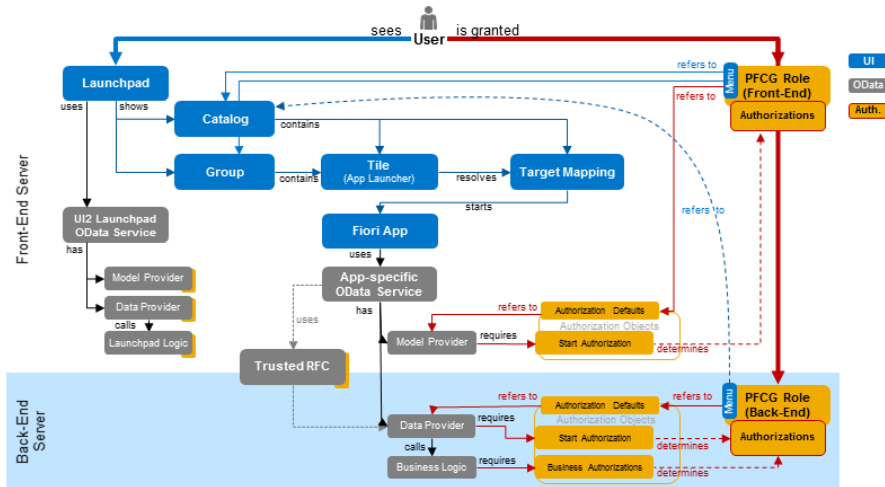
See Ex. 10 at 15, <https://docplayer.net/15973578-Sap-single-sign-on-2-0-overview-presentation.html>.

- an Open Data Protocol (OData), which facilitates secure provisioning and data consumption. In particular, the SAP Netweaver Gateway, also called SAP Gateway, relying on OData, enables SAP applications to share data with a wide range of devices, technologies, and platforms in a way that is easy to understand and consume. Using Odata helps the users to access SAP data from anywhere and from any device.

Dependencies between SAP Fiori UI Entities, OData Services, and Authorizations

The following figure shows the dependencies between the entities:

- The SAP Fiori UI entities that define which SAP Fiori apps are displayed to the user
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- The authorizations required to start and to use the business logic of the SAP Fiori apps. These authorizations are defined by the OData services.

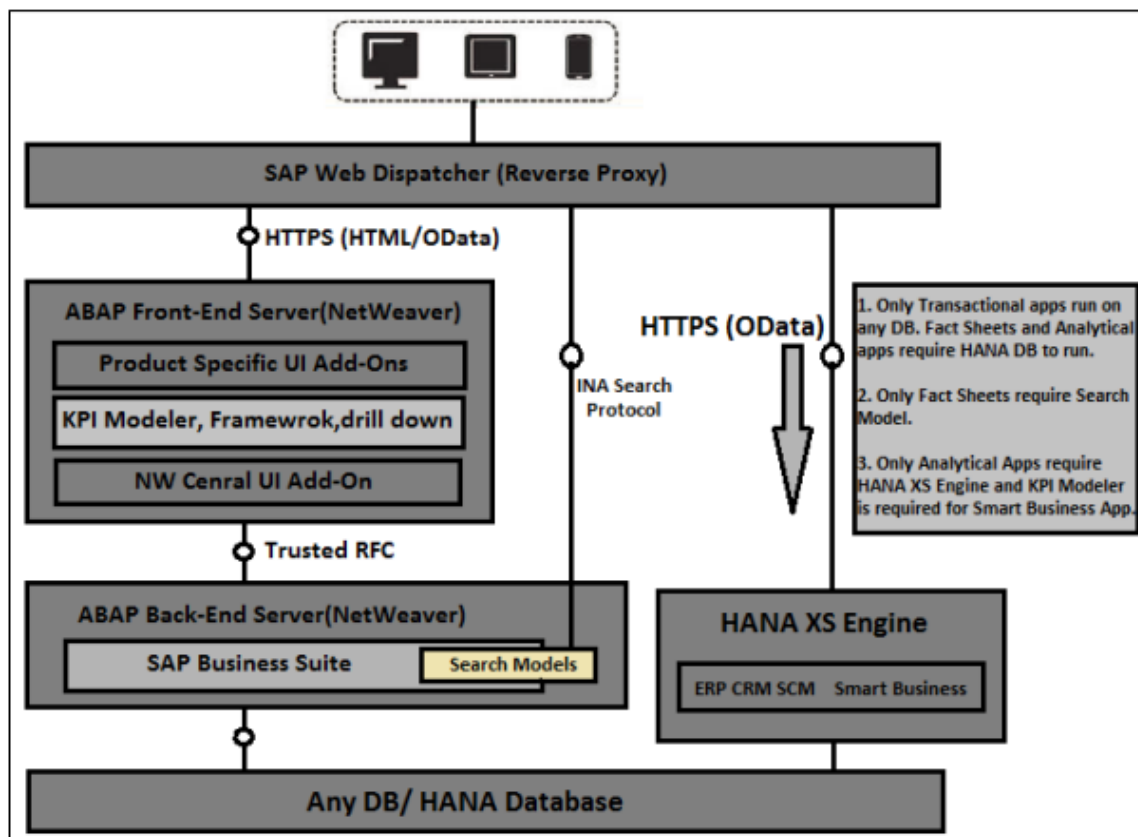


See Ex. 11 at 2,

https://help.sap.com/docs/FIORI_TECHNOLOGY/f3e3a9ffe47f4c039ebd1546747288f2/3c49e1a27806488689b2ad7c67e77291.html.

61. The SAP Fiori launchpad can be used on various devices because a reverse proxy server, to wit, SAP Web Dispatcher, is installed. The SAP Web Dispatcher is mandatory for some SAP Fiori Applications.

62. This reverse proxy server, or SAP Web Dispatcher, handles all web browser requests from end servers via mobile devices or laptops. It can reject or accept connection to SAP Fiori launchpad or system.



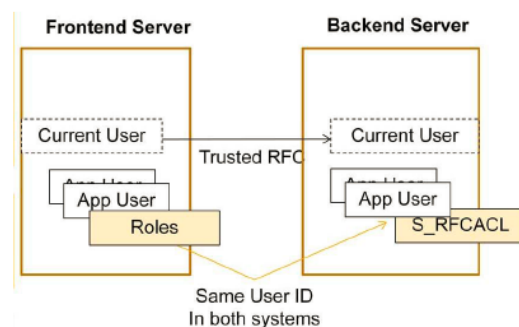
See Ex. 5 at 9, https://www.tutorialspoint.com/sap_fiori/sap_fiori_tutorial.pdf; see also Ex. 13 at 1, https://www.tutorialspoint.com/sap_fiori/sap_fiori_data_flow.htm.

63. SAP Fiori application operates as the grid framework. The SAP ABAP front-end server contains all the User Interface (UI) components of the Fiori system and SAP NetWeaver Gateway (a set of ABAP add-ons), while the SAP ABAP Back-End Server hosts the SAP business applications for which the SAP Fiori apps have been created. Further, a database (such as SAP HANA database) is required to store the corresponding business data.

64. While launching SAP Fiori application, the request is sent to the ABAP front-end server by the SAP Fiori Launchpad via Web Dispatcher. ABAP front-end server authenticates the user when this request is sent. To authenticate the user, the ABAP front-end server uses the authentication and single sign-on (SSO) mechanisms provided by SAP NetWeaver. NetWeaver Gateway is used to set up the connection to back-end server by

creating OData service. Spengo/Kerberos, SAP Logon Tickets and X.509 Certificates are mechanisms that can be used for authentication.

65. To host and provide SAP Fiori application content to the user in a user centric manner with the SAP ABAP. Once initial authentication is done on the ABAP front-end server, a security session is established between the user and the ABAP front-end server. This allows SAP Fiori apps and launchpad to send OData requests (used for querying and updating data over HTTP) to the ABAP back-end server. These requests are communicated securely by using trusted RFC. The user places request via Web browser using HTTPS. Trusted RFC is used to communicate between ABAP Front-End and Back-End Server. Trusted RFC connections are only safe if a strong authorization concept “S_RFCACL” is implemented.



The connection between front-end server to back-end server must be trusted RFC connection. It means same ID is authenticated to back-end system without entering the password. As mentioned earlier, the user ID should have **S_RFCACL** authorization for trusted logon.

A User should have UI roles assigned in Front-end server and back-end roles in back-end server.

See Ex. 13 at 2-3, https://www.tutorialspoint.com/sap_fiori/sap_fiori_data_flow.htm.

66. The SAP Fiori launchpad hosts a number of SAP Fiori Applications, which run on various devices. The SAP applications can be visualized as tiles and operate a grid framework channels. All tiles have one click area that opens the corresponding application. The applications are organized through catalogs and groups.

Intro

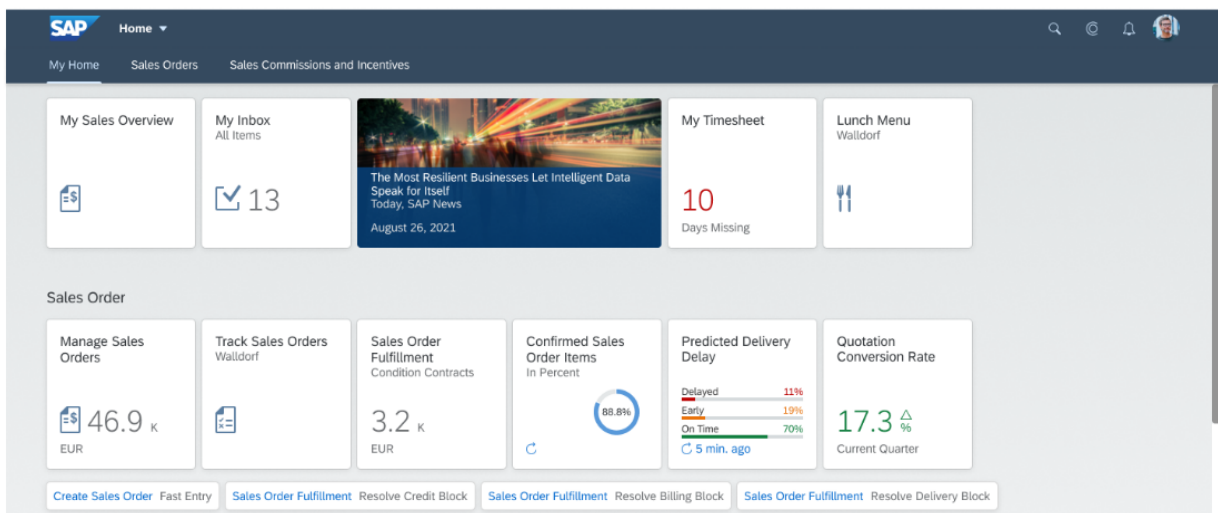
A tile is a container that represents an app on the [SAP Fiori launchpad home page](#).

Tiles can display different types of content, which is based on data supplied by the app. They can contain an icon, a title, an informative text, KPIs, counters, and charts.

A **link** is a special representation of a tile. Links are displayed in a separate area below the tiles area and comprise a title and an optional subtitle. Most tile types can be converted to links, and links can be converted to tiles at any time.

Users can personalize their home page by selecting the tiles for the apps they want to use from the [app finder](#). The apps available in the app finder depend on the user's role.

The number of visible tiles on the launchpad home page depends on the screen resolution. If the tiles in a group do not fit in one row, they are wrapped to the next row.



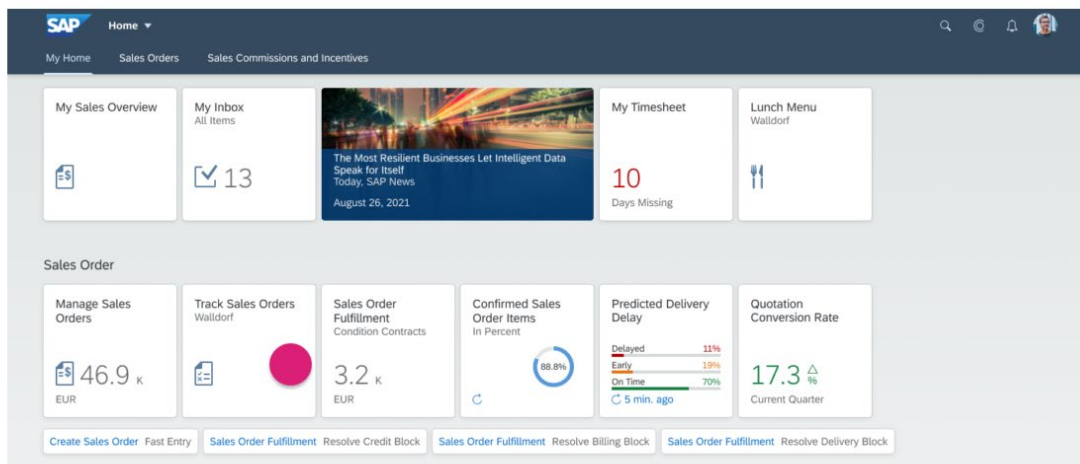
See Ex. 6 at 1-2, <https://experience.sap.com/fiori-design-web/tile/#>.

Behavior and Interaction

All tiles on the [SAP Fiori launchpad](#) support one click event and one navigation target.

Open App

All tiles have one click area that opens the corresponding app.



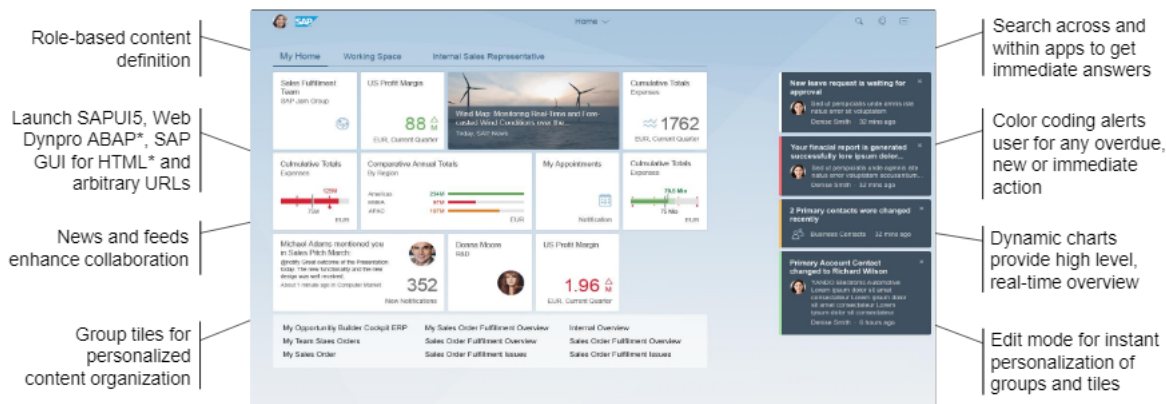
Tile - Interaction

See *id.* at 13-14.

67. The SAP Fiori launchpad presents different views to users based on the roles assigned to them and any personalization. A user should have UI roles assigned in front-end server, and back-end roles in back-end server.

SAP Fiori Architecture

SAP Fiori launchpad - UX

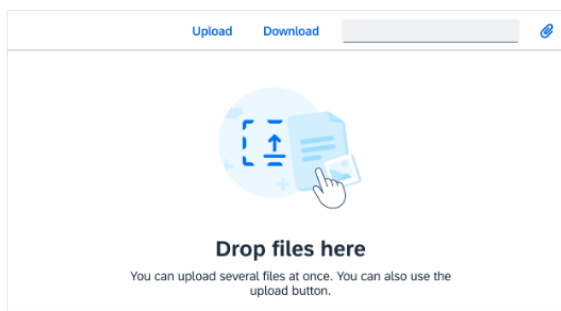


See Ex. 14 at 17, https://kupdf.net/download/sap-fiori-ux-architecture-for-s4h_5908c09edc0d60825d959e7a_pdf.

68. The SAP Fiori launchpad provides additional services such as navigation, personalization (rearrange or move tiles and links, add a group or applications), upload collection control, embedded help, bookmarking, app configuration, notifications, usage analytics, and user info. For instance, users are able to upload multiple files from any device (desktops, tablets, or phones) to an SAP Fiori application. They also can easily select one or multiple files from their computer and drag them onto the upload collection to start the upload.

Empty State

If empty, the upload set provides a hint to use the *Upload* button or drag and drop to upload files. This hint already provides a large enough zone for users to drop their files.



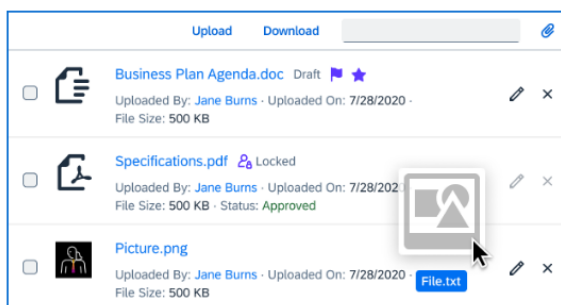
Interaction - No items

Drag and Drop

Users can easily select one or multiple files from their computer and drag them onto the upload set to start the upload.

As the user hovers over the drop zone, a border appears around the upload set to indicate that the file can be released.

The upload process itself is the same as if a file had been added via the *Upload* button.



Interaction - Drag and drop

See Ex. 15 at 4-5, <https://experience.sap.com/fiori-design-web/upload-set/>.

The first step we need to do is make the list drag-able, you can do this with the following code:

```
oSortableList.onAfterRendering = function() {
    if (sap.m.List.prototype.onAfterRendering) {
        sap.m.List.prototype.onAfterRendering.apply(this);
    }
    $("#"+listUIId+" li").draggable({
        helper: "clone"
    });
}
```

See Ex. 16 at 4, <https://community.sap.com/t5/technology-blogs-by-members/how-to-use-drag-and-drop-between-two-sapui5-ui-elements/ba-p/13139835>.

When the drop event is triggered, we can access the ID of our list item which we have dropped on the table. With this ID we can access the list item, retrieve the binding context and the path. And with this path we can read out the correct line from our material data. We then add this data as an item to our table.

And that's how easy it is to implement drag and drop functionalities in SAPUI5.

See id. at 5.

69. Cyandia is informed and believes that SAP was aware of the '250 Patent, and has done nothing to curtail its infringement.

70. Cyandia is informed and believes that SAP has undertaken no efforts to avoid infringement of the '250 Patent, despite its knowledge and understanding that SAP's products and services infringe the '250 Patent. As such, SAP has acted and continues to act recklessly, willfully, wantonly, deliberately, and egregiously in infringement of the '250 Patent, justifying an award to Cyandia of increased damages under 35 U.S.C. § 284 and attorneys' fees and costs incurred under 35 U.S.C. § 285.

71. SAP's infringement of the '250 Patent has injured and continues to injure Cyandia in an amount to be proven at trial, but not less than a reasonable royalty.

72. Cyandia is entitled to damages and any other relief in accordance with 35 U.S.C. §§ 284 and 285.

SECOND CAUSE OF ACTION
(Indirect Infringement of the ‘250 Patent)

73. Cyandia repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.

74. SAP has induced and continues to induce infringement of claims of the ‘250 Patent, including Claims 1, 2, 3, 5, 6, 7, 8, and 9, under 35 U.S.C. § 271(b).

75. SAP has had knowledge of the ‘250 Patent and has actively and knowingly aided and abetted infringement by others, including customers, users and/or vendors. Specifically, SAP’s actions that aided and abetted others to infringe, include instructing, directing and/or requiring its customers, users, and/or vendors to perform one or more steps of the method claims, or provide one or more components of a system or computer-readable medium claim, either literally or under the doctrine of equivalents. All the elements of the claims are used by either SAP, its customers, users, and vendors, or some combination thereof.

76. In particular, SAP has knowingly and actively aided and abetted the direct infringement of the ‘250 Patent by instructing and encouraging its customers, users, and vendors to meet the elements of the ‘250 Patent with the ‘250 Accused Products. Such use is consistent with how the ‘250 Accused Products are described to directly infringe the ‘250 Patent and how they are intended to be used, as described above and incorporated by reference here. SAP’s specific intent to encourage infringement includes, but is not limited to: (a) advising its customers and users to use the ‘250 Accused Products in an infringing manner through direct communications via training, support services, or sales calls, thereby providing a mechanism through which third parties may infringe; (b) advertising and promoting the use of the ‘250 Accused Products in an infringing manner; (c) and distributing guidelines and instructions on how to setup the ‘250 Accused Products in an infringing manner. *See, e.g., Ex.*

17, https://www.tutorialspoint.com/sap_fiori/sap_fiori_security.htm. To the extent SAP's customers, users, and vendors direct and control the systems and methods in the claims, SAP obtains benefits from the control of the system as a whole. SAP and its customers, users, and vendors put the systems and methods described in the claims into service to the benefit of SAP's ability to provide a uniform experience to the user when interacting with multiple information forms across multiple types of computing devices.

77. SAP updates and maintains a support website that includes technical documentation encouraging the use of the '250 Accused Products in an infringing manner. Example technical documentation includes knowledge articles, videos, user guides, technical support articles, and a knowledge center. The technical documentation covers the operation of the '250 Accused Products in-depth, including by advertising the '250 Accused Products' infringing features and instructing customers, users, and vendors to configure and use the '250 Accused Products in an infringing manner. *See, e.g.,* Ex. 17, https://www.tutorialspoint.com/sap_fiori/sap_fiori_security.htm.

78. SAP engaged in such actions with specific intent to cause infringement or with willful blindness to the resulting infringement given that SAP had actual knowledge of the '250 Patent and knowledge that its acts were inducing infringement of the '250 Patent.

79. SAP is entitled to damages and any other relief in accordance with 35 U.S.C. §§ 284 and 285.

THIRD CAUSE OF ACTION

(Direct Infringement of the '285 Patent pursuant to 35 U.S.C. § 271(a))

80. Cyandia repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.

81. SAP has infringed and continues to infringe claims of the '285 Patent, including Claims 37, 38, 39, 40, 41, in violation of 35 U.S.C. § 271(a).


82. SAP's infringement is based upon literal infringement or infringement under the doctrine of equivalents, or both.

83. SAP's acts of making, using, importing, selling, and/or offering for sale infringing products and services have been without the permission, consent, authorization, or license of Cyandia.

84. SAP's infringement includes, but is not limited to, the manufacture, use, sale, importation and/or offer for sale of products and services incorporating Cyandia's technology covered by the '285 Patent, including, but not limited to, products and services, such as the SAP Fiori User Experience (UX) platform, offering the SAP Fiori launchpad and applications (the " '285 Accused Products").

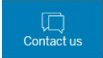
85. The '285 Accused Products embody the patent invention of the '285 Patent and infringe the '285 Patent because they utilize a combination of features that collectively practiced each limitation of claim 37 of the '285 Patent. SAP is responsible for sales, marketing, distribution related to its infringing product and service, the SAP Fiori User Experience (UX) platform for SAP software and applications. In particular, the SAP Fiori launchpad feature provides a user-centered design so that the user can access secured relevant information and applications via multiple devices.

... / All Products / SAP Business Technology Platform
SAP Fiori

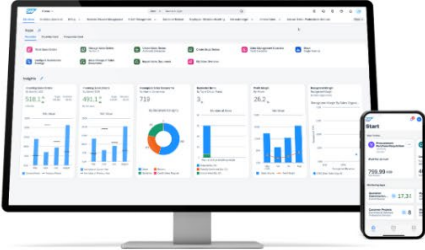


What is SAP Fiori?

SAP Fiori is a design system that enables you to create business apps with a consumer-grade user experience, turning casual users into SAP experts with simple screens that run on any device. By using the SAP Fiori design guidelines and tools that we use at SAP, you can easily build and customize your own apps that are consistent with what we ship with SAP S/4HANA and our other enterprise software solutions.



- Improve user satisfaction while increasing productivity and data quality
- Work from anywhere with optimized native mobile and responsive Web apps
- Adapt and scale development quickly using UI flexibility and rapid development



See Ex. 18 at 1-2, <https://www.sap.com/products/technology-platform/fiori.html#>.

86. SAP’s infringement includes, but is not limited to, the manufacture, use, sale, importation and/or offer for sale of products and services incorporating Cyandia’s technology covered by the ‘285 Patent, including, but not limited to, products and services, such as the SAP Fiori User Experience (UX) platform, offering the SAP Fiori launchpad and applications (the “‘285 Accused Products”).

SAP Fiori



See Ex. 5 at 2, https://www.tutorialspoint.com/sap_fiori/sap_fiori_tutorial.pdf.

87. The '285 Patent allows multiple channels to be configured and implemented, through which information relevant to a given user is presented for user interaction via one or more user platforms associated with the user. A user profile is established identifying user preferences and one or more platform identifies. The user profile is managed to grant the user access to specific ones of the multiple channels.

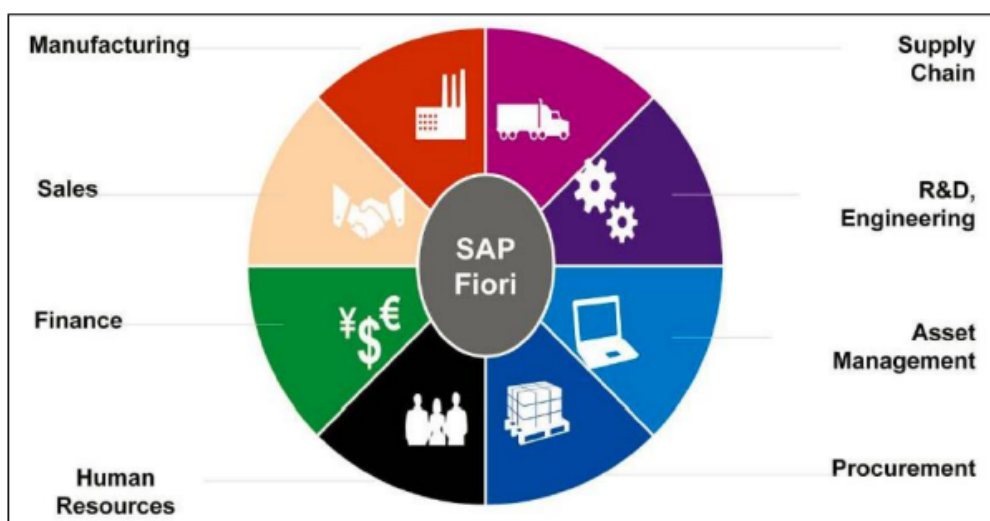
88. The Fiori launchpad is based on some architectural principles, including but not limited to:

- a Central Access to applications through the SAP Fiori launchpad.

1. SAP Fiori – Introduction

SAP Fiori is a new user experience (UX) for SAP software and applications. It provides a set of applications that are used in regular business functions like work approvals, financial apps, calculation apps and various self-service apps.

SAP Fiori provides 300+ role-based applications like HR, Manufacturing, finance, etc. When you open the SAP Fiori home page application, you will see a picture of the flowers. It is because Fiori means 'flowers' in Italian.



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.

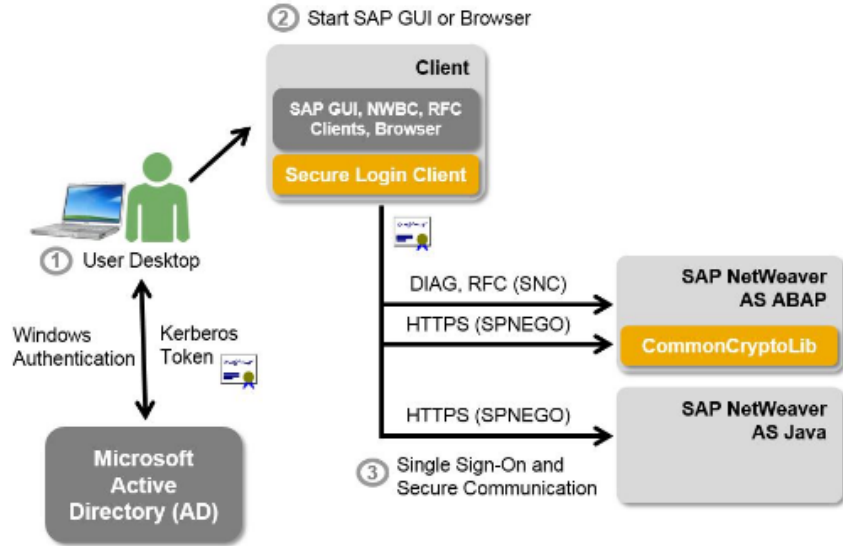
SAP Fiori enables multiple device applications that allow users to start a process on their desktop/laptops and to continue that process on a smartphone or on a tablet. SAP has developed Fiori Apps based on User interface UI5.

See Ex. 5 at 1, https://www.tutorialspoint.com/sap_fiori/sap_fiori_tutorial.pdf.

- a Security with Single Sign-On (SSO) as well as role-based authentication and authorization – see below examples of Authentication Methods.

(1) Spnego /Kerberos:

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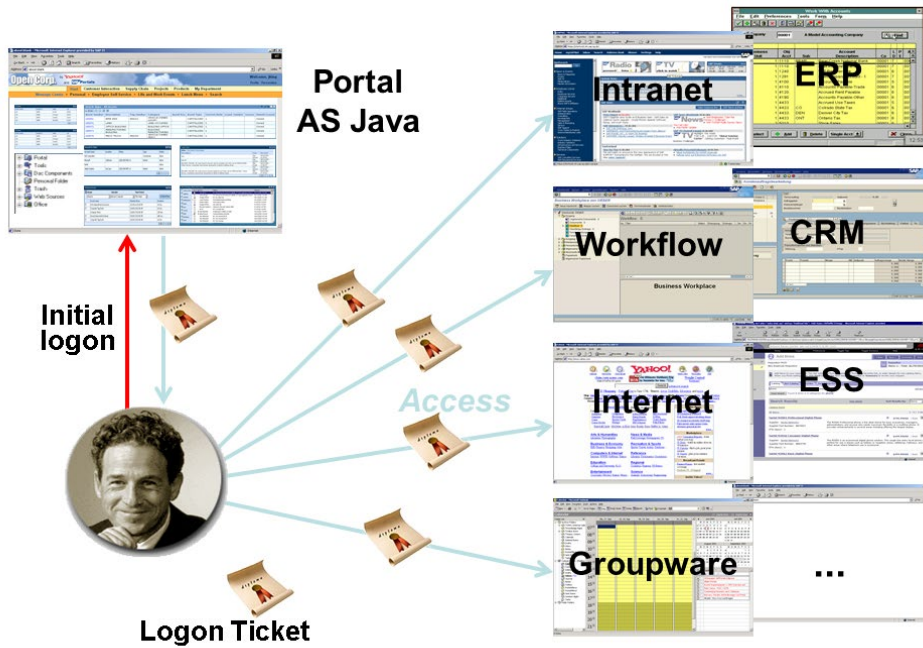


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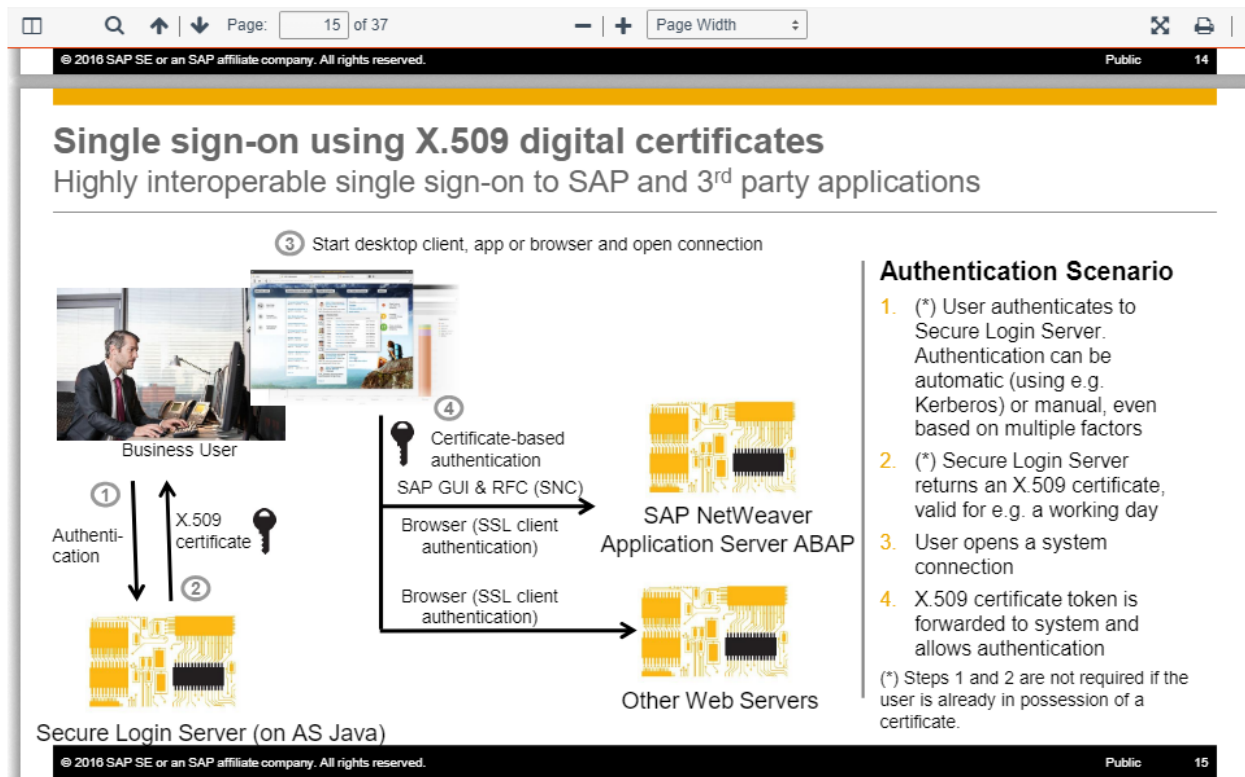
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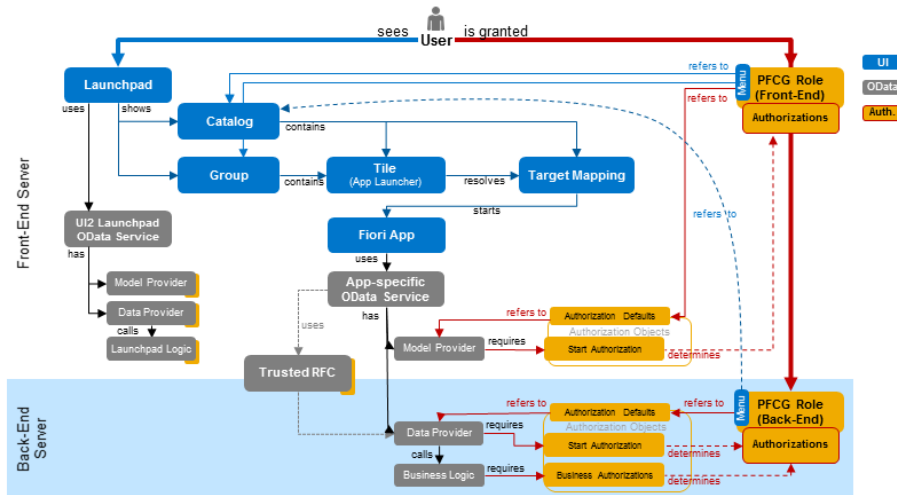
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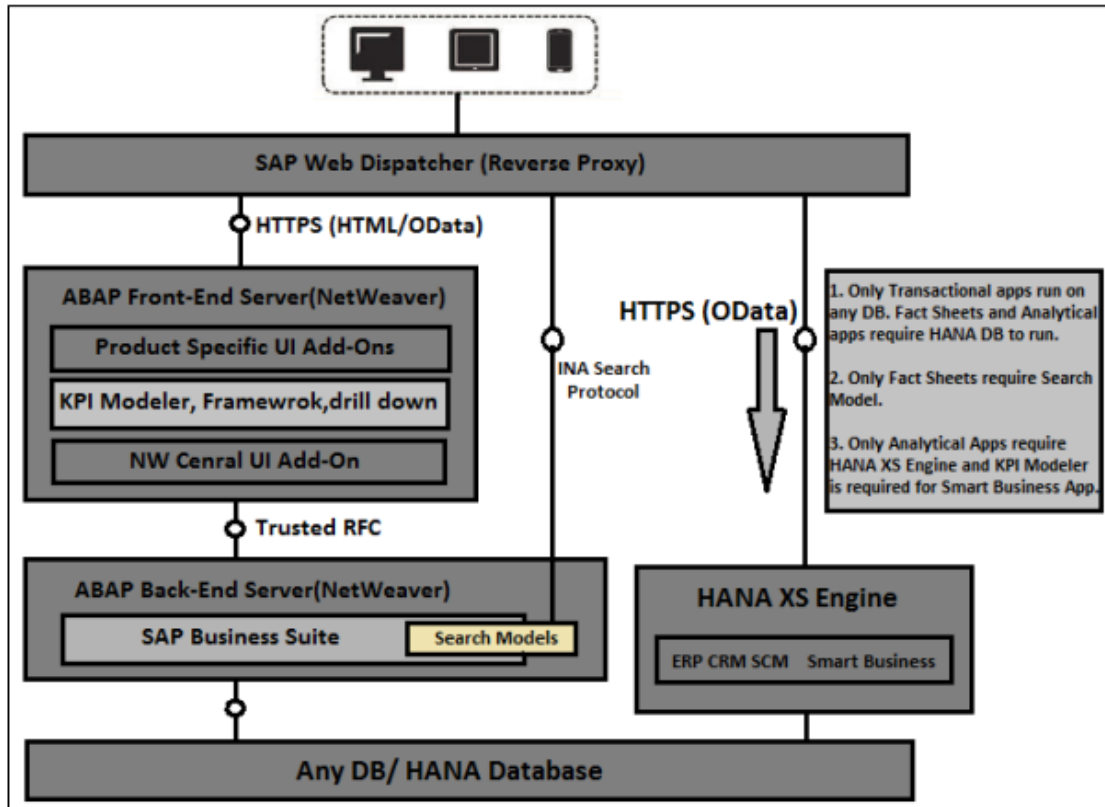


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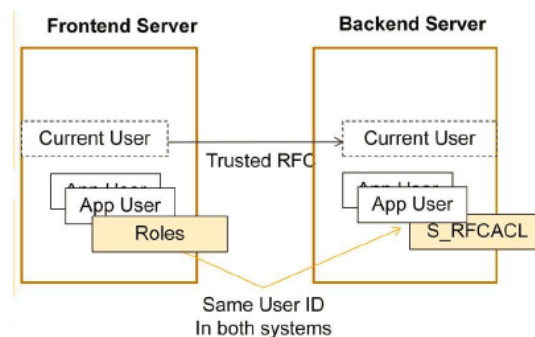
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Intro

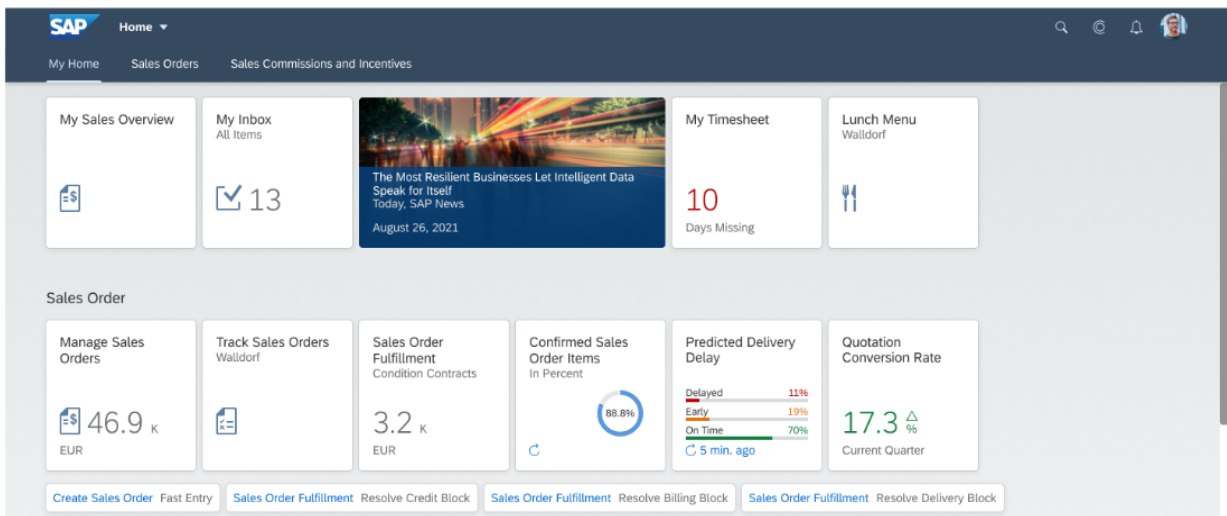
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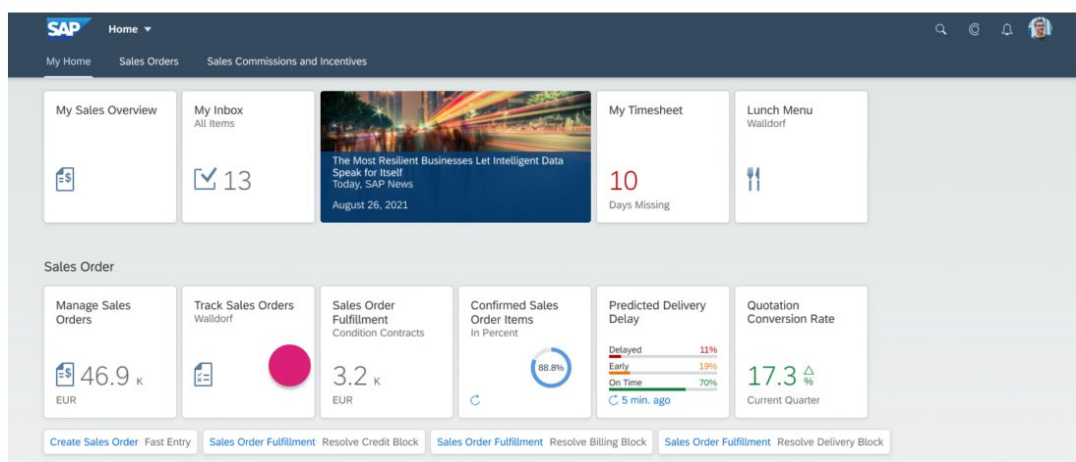
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Behavior and Interaction [↗](#)

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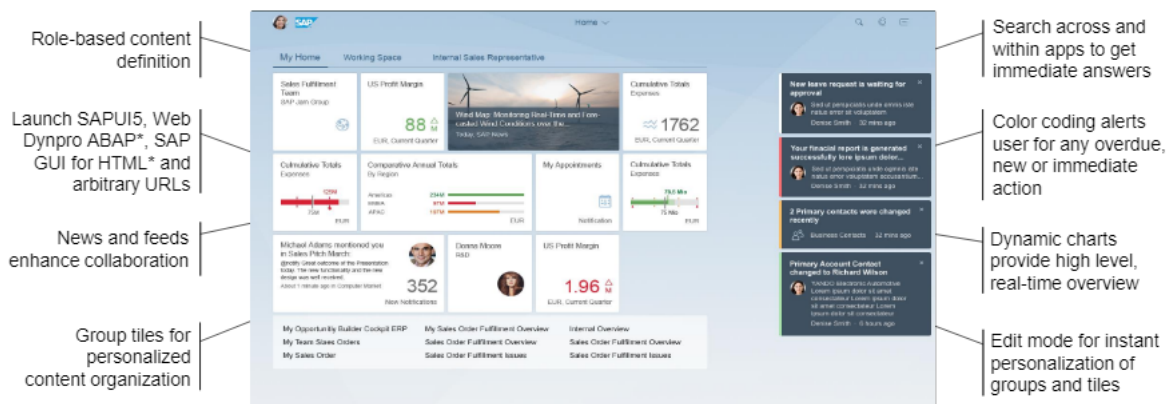
Tile - Interaction

See id. at 13-14.

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SAP Fiori Architecture

SAP Fiori launchpad - UX

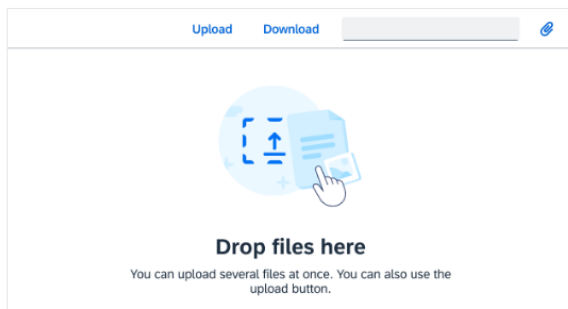


See Ex. 14 at 17, https://kupdf.net/download/sap-fiori-ux-architecture-for-s4h_5908c09edc0d60825d959e7a_pdf.

96. The SAP Fiori launchpad provides additional services such as navigation, personalization (rearrange or move tiles and links, add a group or applications), upload collection control, embedded help, bookmarking, app configuration, notifications, usage analytics, and user info. For instance, users are able to upload multiple files from any device (desktops, tablets, or phones) to an SAP Fiori application. They also can easily select one or multiple files from their computer and drag them onto the upload collection to start the upload.

Empty State

If empty, the upload set provides a hint to use the *Upload* button or drag and drop to upload files. This hint already provides a large enough zone for users to drop their files.



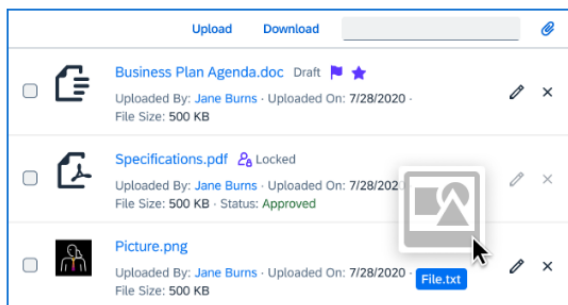
Interaction - No items

Drag and Drop

Users can easily select one or multiple files from their computer and drag them onto the upload set to start the upload.

As the user hovers over the drop zone, a border appears around the upload set to indicate that the file can be released.

The upload process itself is the same as if a file had been added via the *Upload* button.



Interaction - Drag and drop

See Ex. 15 at 4-5, <https://experience.sap.com/fiori-design-web/upload-set/>.

The first step we need to do is make the list drag-able, you can do this with the following code:

```
oSortableList.onAfterRendering = function() {
    if (sap.m.List.prototype.onAfterRendering) {
        sap.m.List.prototype.onAfterRendering.apply(this);
    }
    $("#"+listUIId+" li").draggable({
        helper: "clone"
    });
}
```

See Ex. 16 at 4, <https://community.sap.com/t5/technology-blogs-by-members/how-to-use-drag-and-drop-between-two-sapui5-ui-elements/ba-p/13139835>.

When the drop event is triggered, we can access the ID of our list item which we have dropped on the table. With this ID we can access the list item, retrieve the binding context and the path. And with this path we can read out the correct line from our material data. We then add this data as an item to our table.

And that's how easy it is to implement drag and drop functionalities in SAPUI5.

See id. at 5.

97. Cyandia is informed and believes that SAP was aware of the '285 Patent, and has done nothing to curtail its infringement.

98. Cyandia is informed and believes that SAP has undertaken no efforts to avoid infringement of the '285 Patent, despite its knowledge and understanding that SAP's products and services infringe the '285 Patent. As such, SAP has acted and continues to act recklessly, willfully, wantonly, deliberately, and egregiously in infringement of the '285 Patent, justifying an award to Cyandia of increased damages under 35 U.S.C. § 284 and attorneys' fees and costs incurred under 35 U.S.C. § 285.

99. SAP's infringement of the '285 Patent has injured and continues to injure Cyandia in an amount to be proven at trial, but not less than a reasonable royalty.

100. Cyandia is entitled to damages and any other relief in accordance with 35 U.S.C. §§ 284 and 285.

FOURTH CAUSE OF ACTION
(Indirect Infringement of the '285 Patent)

101. Cyandia repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.

102. SAP has induced and continues to induce infringement of claims of the '285 Patent under 35 U.S.C. § 271(b).

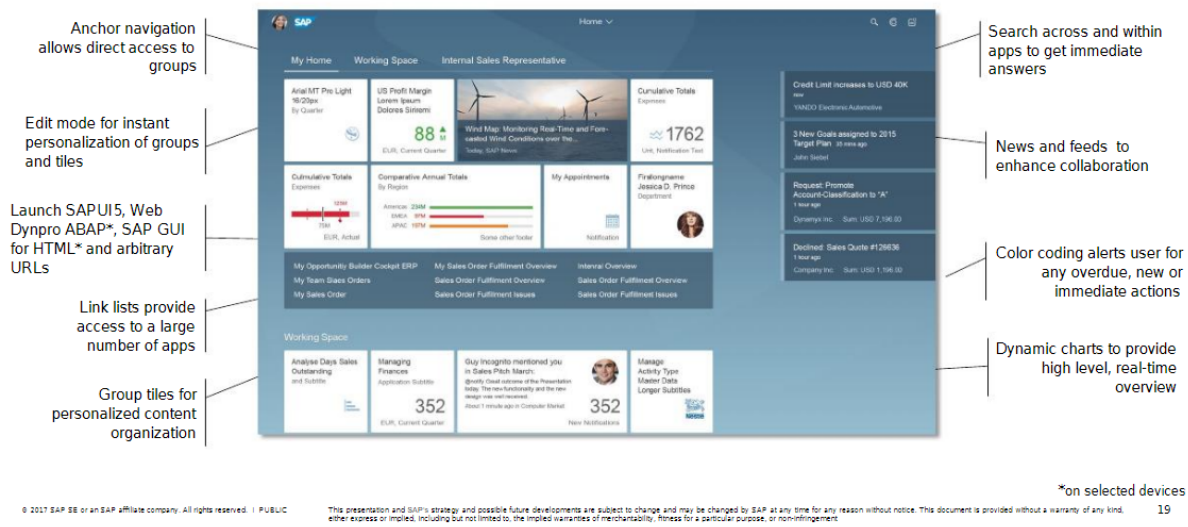
103. SAP has had knowledge of the '285 Patent and has actively and knowingly aided and abetted infringement by others, including customers, users and/or vendors.

104. Specifically, SAP's actions that aided and abetted others to infringe, include instructing, directing and/or requiring its customers, users, and/or vendors to perform one or more steps of the method claims, or provide one or more components of a system or computer-readable medium claim, either literally or under the doctrine of equivalents. All the elements of the claims are used by either SAP, its customers, users, and vendors, or some combination thereof. SAP has known or has been willfully blind to the fact that it is inducing others by practicing, either themselves or in conjunction with SAP, claims of the '285 Patent, including Claims 37, 38, 39, 40, and 41. In particular, SAP has knowingly and actively aided and abetted the direct infringement of the '250 Patent by instructing and encouraging its customers, users, and vendors to meet the elements of the '285 Patent with the '285 Accused Products. Such use is consistent with how the '285 Accused Products are described to directly infringe the '285 Patent and how they are intended to be used, as described above and incorporated by reference here. SAP's specific intent to encourage infringement includes, but is not limited to: (a) advising its customers and users to use the '285 Accused Products in an infringing manner through direct communications via training, support services, or sales calls, thereby providing a mechanism through which third parties may infringe; (b) advertising and promoting the use of

the '285 Accused Products in an infringing manner; (c) and distributing guidelines and instructions on how to setup the '285 Accused Products in an infringing manner. *See, e.g.*, Ex. 17, https://www.tutorialspoint.com/sap_fiori/sap_fiori_security.htm. To the extent SAP's customers, users, and vendors direct and control the systems and methods in the claims, SAP obtains benefits from the control of the system as a whole. SAP and its customers, users, and vendors put the systems and methods described in the claims into service to the benefit of SAP's ability to provide a user-centered design so that the user can access secured relevant information and applications via multiple devices.

SAP Fiori Architecture

SAP Fiori launchpad – User Experience



See Ex. 19 at 19, <https://www.readkong.com/page/sap-fiori-architecture-overview-to-deep-dive-with-focus-6811873?p=2>.

105. SAP updates and maintains a support website that includes technical documentation encouraging the use of the '285 Accused Products in an infringing manner. Example technical documentation includes knowledge articles, videos, user guides, technical support articles, and a knowledge center. The technical documentation covers the operation of

the ‘285 Accused Products in-depth, including by advertising the ‘285 Accused Products’ infringing features and instructing customers, users, and vendors to configure and use the ‘285 Accused Products in an infringing manner. *See, e.g.*, Ex. 17, https://www.tutorialspoint.com/sap_fiori/sap_fiori_security.htm.

106. SAP engaged in such actions with specific intent to cause infringement or with willful blindness to the resulting infringement given that SAP had actual knowledge of the ‘285 Patent and knowledge that its acts were inducing infringement of the ‘285 Patent.

107. SAP is entitled to damages and any other relief in accordance with 35 U.S.C. §§ 284 and 285.

FIFTH CAUSE OF ACTION
(Direct Infringement of the ‘641 Patent)

108. Cyandia repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.

109. SAP has infringed and continues to infringe claims of the ‘641 Patent, including Claim 1.

110. SAP’s acts of making, using, importing, selling, and/or offering for sale infringing products and services have been without the permission, consent, authorization, or license of Cyandia.

111. SAP’s infringement includes, but is not limited to, the manufacture, use, sale, importation and/or offer for sale of products and services incorporating Cyandia’s technology covered by the ‘641 Patent, including, but not limited to, products and services, such as the SAP Fiori User Experience (UX) platform, offering the SAP Fiori launchpad and applications (the “ ‘641 Accused Products”).

112. The ‘641 Accused Products embody the patent invention of the ‘641 Patent and infringes the ‘641 Patent because they utilize a combination of features that collectively practiced each limitation of claim 1 of the ‘641 Patent. SAP is responsible for sales, marketing, distribution related to its infringing product and service, the SAP Fiori User Experience (UX) platform for SAP software and applications. In particular, the SAP Fiori launchpad feature provides a user-centered design so that the user can access secured relevant information and applications based on his or her role via multiple devices. It allows a user to choose from a wide array of ready-to-use tiles from the tile catalog as part of the SAP Fiori launchpad personalization. Additionally, the SAP Netweaver Gateway, also called SAP Gateway, which enables SAP applications to share data with a wide range of devices, technologies, and platforms in a way that is easy to understand and consume, requires minimum hardware requirements, including (1) a processor, (2) a random access memory (RAM), and (3) hard disk capacity.

SAP Fiori Architecture

SAP Fiori launchpad – User Experience

The screenshot shows the SAP Fiori launchpad interface for an Internal Sales Representative. The interface is organized into several sections:

- My Home:** Contains tiles for 'Analyst Pre Light', 'US Profit Margin', 'Cumulative Totals Expenses', 'Comparative Annual Totals', 'My Appointments', and 'Finalname: Jessica D. Prince'.
- Working Space:** Contains tiles for 'Analyses Days Sales Outstanding', 'Managing Finance', 'My Insights mentioned you in Sales Push Search', and 'Manage Activity Type'.
- Right Sidebar:** Contains a search bar, 'Credit Limit increases to USD 40K', '3 New Quota assigned to 2015 Target Plan', 'Request: Promote Account Classification to "A"', and 'Declined Sales Quote #129638'.

Callouts on the left side of the image describe the following features:

- Anchor navigation allows direct access to groups
- Edit mode for instant personalization of groups and tiles
- Launch SAPUI5, Web Dynpro ABAP*, SAP GUI for HTML* and arbitrary URLs
- Link lists provide access to a large number of apps
- Group tiles for personalized content organization

Callouts on the right side of the image describe the following features:

- Search across and within apps to get immediate answers
- News and feeds to enhance collaboration
- Color coding alerts user for any overdue, new or immediate actions
- Dynamic charts to provide high level, real-time overview

*on selected devices

See Ex. 19 at 19, <https://www.readkong.com/page/sap-fiori-architecture-overview-to-deep-dive-with-focus-6811873?p=2>.

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 Ex. 5 at 10, https://www.tutorialspoint.com/sap_fiori/sap_fiori_tutorial.pdf.

113. The SAP Fiori launchpad feature provides a set of multiple applications that are used in regular business functions, that allows users to interact with multiple information forms across multiple types of computing devices and platforms, including but not limited to, various smartphones, tablets, laptops, or desktop computers.

SAP Fiori



See Ex. 5 at 2, https://www.tutorialspoint.com/sap_fiori/sap_fiori_tutorial.pdf.

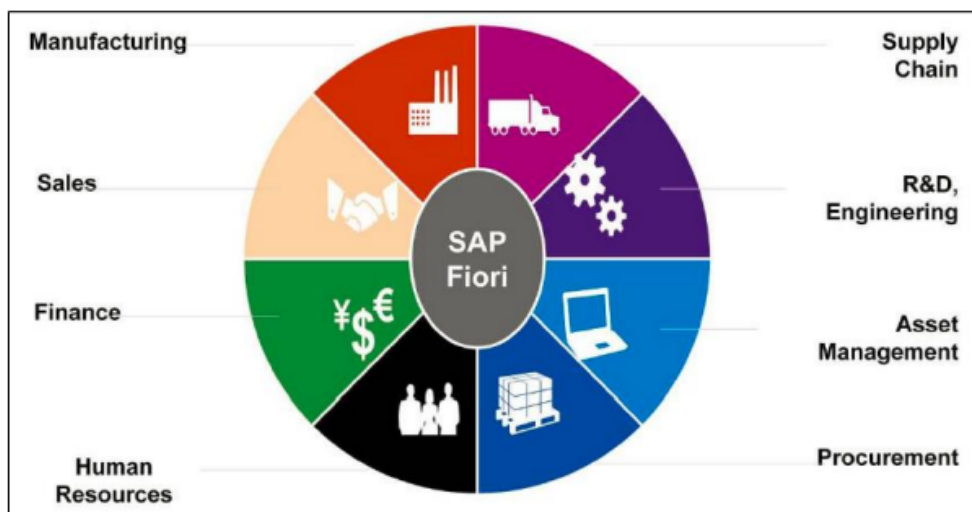
114. The Fiori launchpad is based on some architectural principles, including but not limited to:

- a Central Access to applications through the SAP Fiori launchpad –

1. SAP Fiori – Introduction

SAP Fiori is a new user experience (UX) for SAP software and applications. It provides a set of applications that are used in regular business functions like work approvals, financial apps, calculation apps and various self-service apps.

SAP Fiori provides 300+ role-based applications like HR, Manufacturing, finance, etc. When you open the SAP Fiori home page application, you will see a picture of the flowers. It is because Fiori means 'flowers' in Italian.



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.

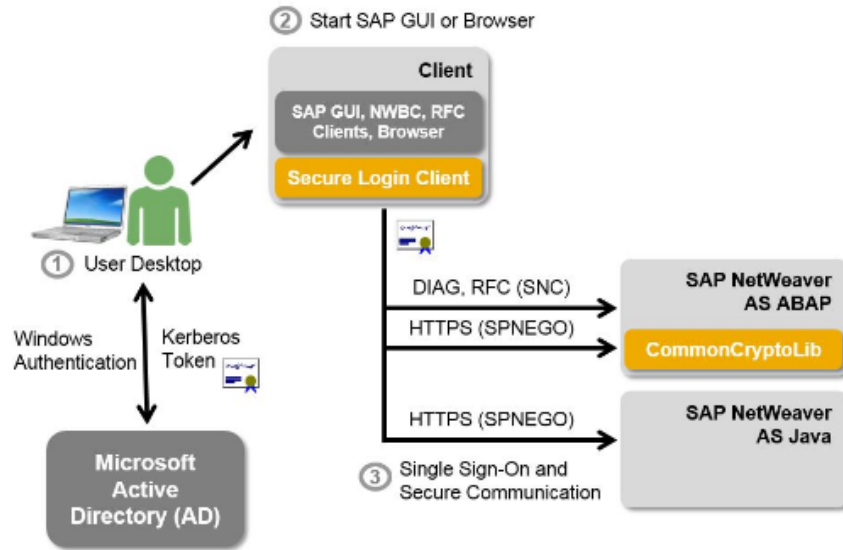
SAP Fiori enables multiple device applications that allow users to start a process on their desktop/laptops and to continue that process on a smartphone or on a tablet. SAP has developed Fiori Apps based on User interface UI5.

See Ex. 5 at 1, https://www.tutorialspoint.com/sap_fiori/sap_fiori_tutorial.pdf.

- a Security with Single Sign-On (SSO) as well as role-based authentication and authorization – see below examples of Authentication Methods:

(1) Spnego /Kerberos:

Single Sign-On Based on Kerberos / SPNEGO

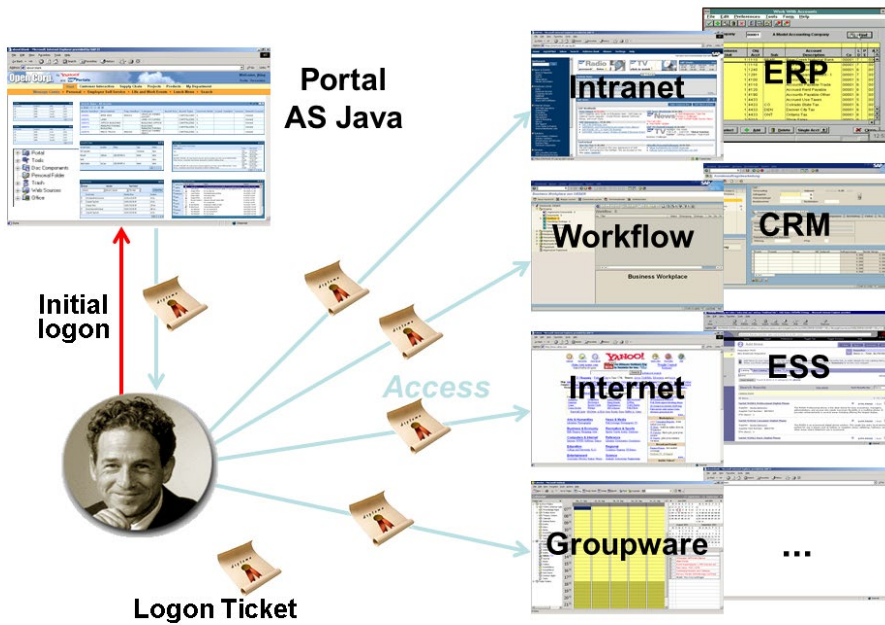


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See Ex. 8 at 2, <https://community.sap.com/t5/technology-blogs-by-sap/sap-single-sign-on-authenticate-with-kerberos-spnego/ba-p/13321445>.

(2) SAP Logon Tickets:

For an overview of the authentication process when using logon tickets, see the figure below.



See Ex. 9 at 2,
https://help.sap.com/saphelp_ewm900/helpdata/en/43/9d7bb1e08021b5e10000000a1553f6/content.htm?no_cache=true.

(3) X. 509 Certificates:

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Single sign-on using X.509 digital certificates

Highly interoperable single sign-on to SAP and 3rd party applications

③ Start desktop client, app or browser and open connection

Authentication Scenario

- (*) User authenticates to Secure Login Server. Authentication can be automatic (using e.g. Kerberos) or manual, even based on multiple factors
- (*) Secure Login Server returns an X.509 certificate, valid for e.g. a working day
- User opens a system connection
- X.509 certificate token is forwarded to system and allows authentication

(*) Steps 1 and 2 are not required if the user is already in possession of a certificate.

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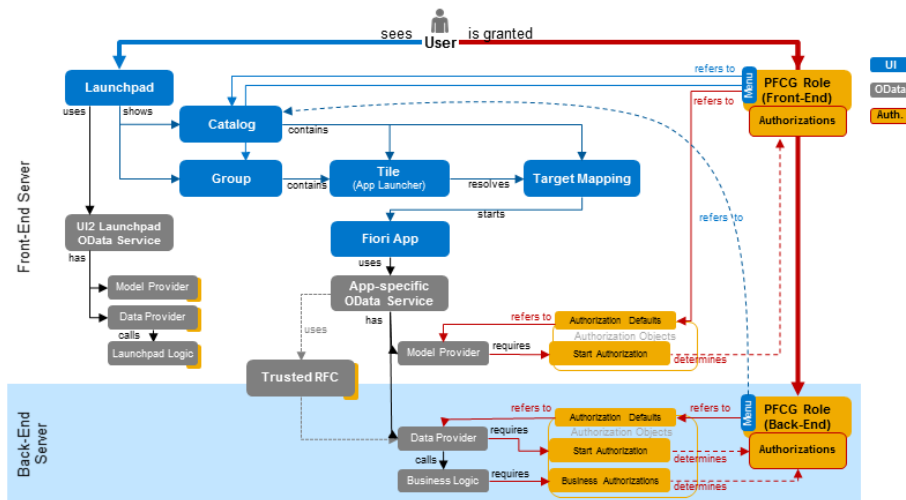
See Ex. 10 at 15, <https://docplayer.net/15973578-Sap-single-sign-on-2-0-overview-presentation.html>.

- an Open Data Protocol (OData), which facilitates secure provisioning and data consumption. In particular, the SAP Netweaver Gateway, also called SAP Gateway, relying on OData, enables SAP applications to share data with a wide range of devices, technologies, and platforms in a way that is easy to understand and consume. Using Odata helps the users to access SAP data from anywhere and from any device.

Dependencies between SAP Fiori UI Entities, OData Services, and Authorizations

The following figure shows the dependencies between the entities:

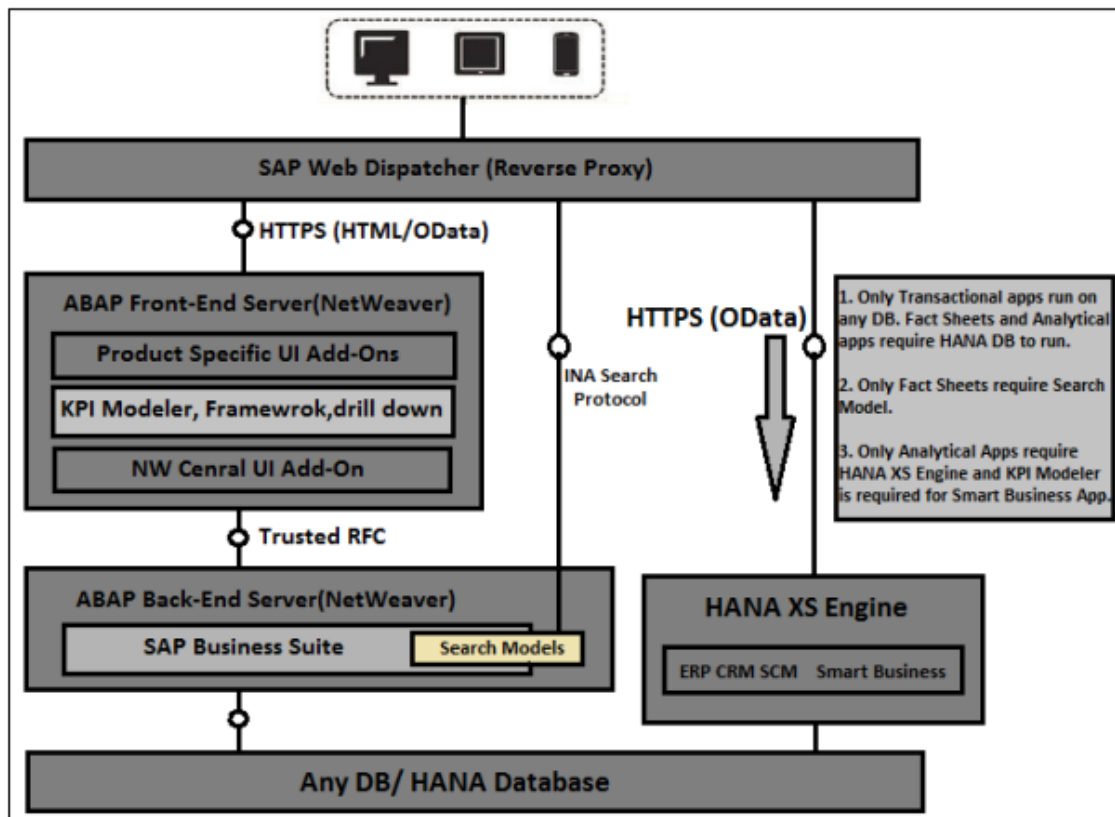
- The SAP Fiori UI entities that define which SAP Fiori apps are displayed to the user
- The OData services that retrieve the dynamic data to be displayed from the business logic for the SAP Fiori apps
- The authorizations required to start and to use the business logic of the SAP Fiori apps. These authorizations are defined by the OData services.



See Ex. 11 at 2, https://help.sap.com/docs/FIORI_TECHNOLOGY/f3e3a9ffe47f4c039ebd1546747288f2/3c49e1a27806488689b2ad7c67e77291.html.

115. The SAP Fiori launchpad can be used on various devices because a reverse proxy server, to wit, SAP Web Dispatcher, is installed. The SAP Web Dispatcher is mandatory for some SAP Fiori Applications.

116. This reverse proxy server, or SAP Web Dispatcher, handles all web browser requests from end servers via mobile devices or laptops. It can reject or accept connection to SAP Fiori launchpad or system.

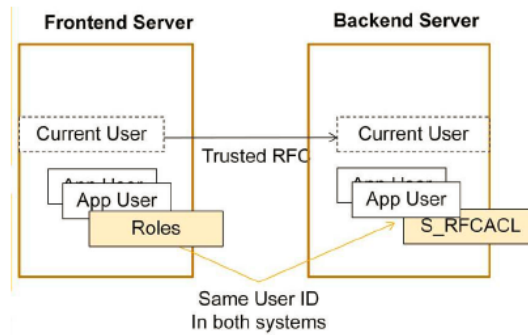


See Ex. 5 at 9, https://www.tutorialspoint.com/sap_fiori/sap_fiori_tutorial.pdf; see also Ex. 13 at 1, https://www.tutorialspoint.com/sap_fiori/sap_fiori_data_flow.htm.

117. To host and provide SAP Fiori application content to the user, the SAP ABAP front-end server must contain all the User Interface (UI) components of the Fiori system and SAP NetWeaver Gateway (a set of ABAP add-ons), while the SAP ABAP Back-End Server

hosts the SAP business applications for which the SAP Fiori apps have been created. Further, a database (such as SAP HANA database) is required to store the corresponding business data. While launching SAP Fiori application, the request is sent to the ABAP front-end server by the SAP Fiori Launchpad via Web Dispatcher. ABAP front-end server authenticates the user when this request is sent. To authenticate the user, the ABAP front-end server uses the authentication and single sign-on (SSO) mechanisms provided by SAP NetWeaver. NetWeaver Gateway is used to set up the connection to back-end server by creating OData service. Spnego/Kerberos, SAP Logon Tickets and X.509 Certificates are mechanisms that can be used for authentication.

118. To host and provide SAP Fiori application content to the user, the SAP ABAP. Once initial authentication is done on the ABAP front-end server, a security session is established between the user and the ABAP front-end server. This allows SAP Fiori apps and launchpad to send OData requests (used for querying and updating data over HTTP) to the ABAP back-end server. These requests are communicated securely by using trusted RFC. The user places request via Web browser using HTTPS. Trusted RFC is used to communicate between ABAP Front-End and Back-End Server. Trusted RFC connections are only safe if a strong authorization concept "S_RFCACL" is implemented.



The connection between front-end server to back-end server must be trusted RFC connection. It means same ID is authenticated to back-end system without entering the password. As mentioned earlier, the user ID should have **S_RFCACL** authorization for trusted logon.

A User should have UI roles assigned in Front-end server and back-end roles in back-end server.

See Ex. 13 at 2-3, https://www.tutorialspoint.com/sap_fiori/sap_fiori_data_flow.htm.

119. The SAP Fiori launchpad hosts a number of SAP Fiori Applications, which run on various devices. The SAP applications can be visualized as tiles. All tiles have one click area that opens the corresponding application. The applications are organized through catalogs and groups.

Intro

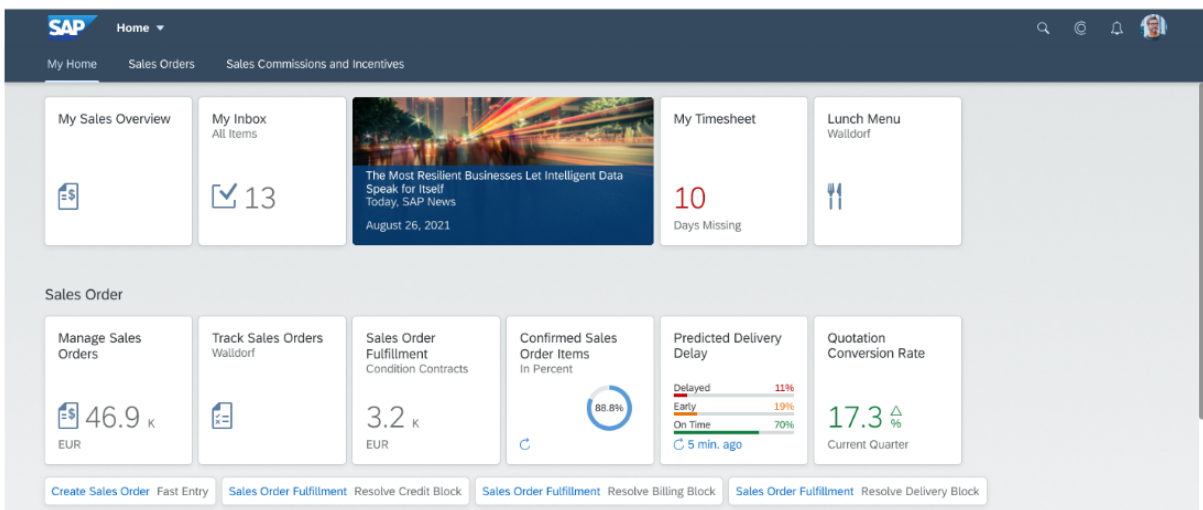
A tile is a container that represents an app on the [SAP Fiori launchpad home page](#).

Tiles can display different types of content, which is based on data supplied by the app. They can contain an icon, a title, an informative text, KPIs, counters, and charts.

A **link** is a special representation of a tile. Links are displayed in a separate area below the tiles area and comprise a title and an optional subtitle. Most tile types can be converted to links, and links can be converted to tiles at any time.

Users can personalize their home page by selecting the tiles for the apps they want to use from the [app finder](#). The apps available in the app finder depend on the user's role.

The number of visible tiles on the launchpad home page depends on the screen resolution. If the tiles in a group do not fit in one row, they are wrapped to the next row.



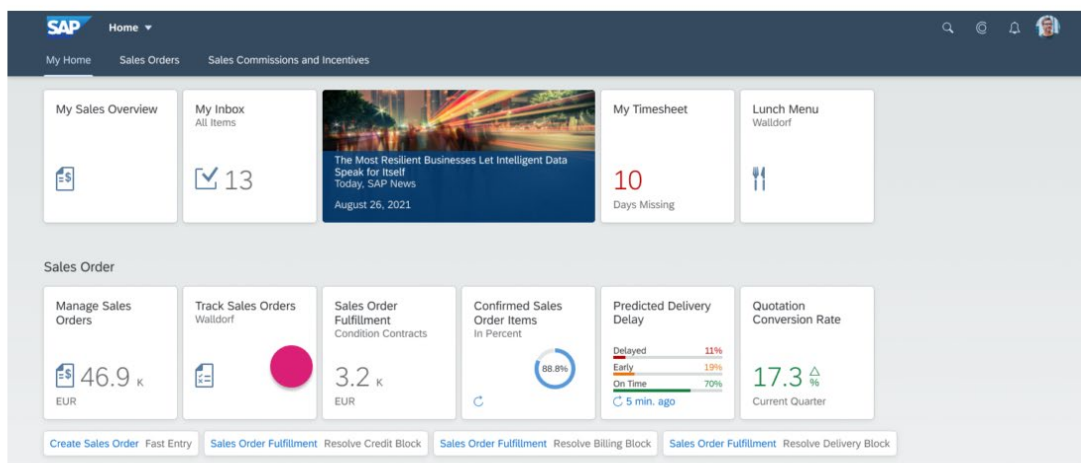
See Ex. 6 at 1-2, <https://experience.sap.com/fiori-design-web/tile/#>.

Behavior and Interaction

All tiles on the [SAP Fiori launchpad](#) support one click event and one navigation target.

Open App

All tiles have one click area that opens the corresponding app.



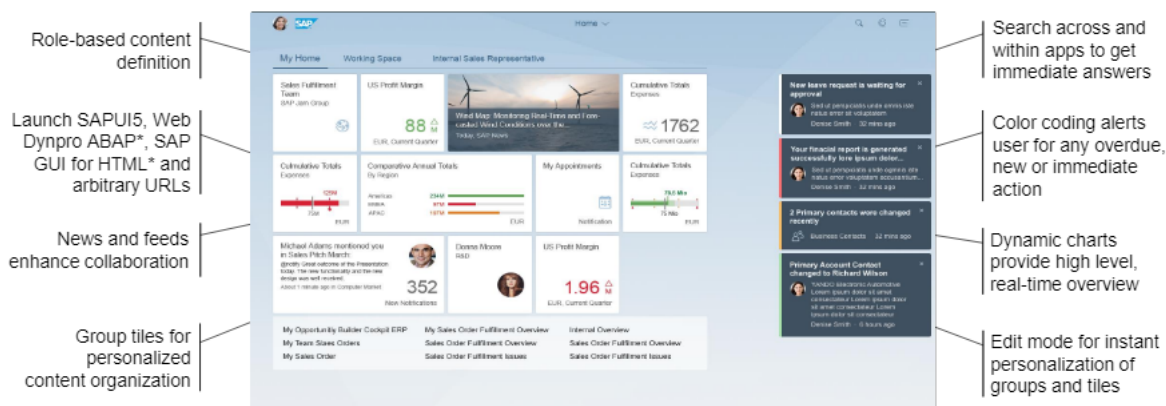
Tile - Interaction

See *id.* at 13-14.

120. The SAP Fiori launchpad presents different views to users based on the roles assigned to them and any personalization. A user should have UI roles assigned in front-end server, and back-end roles in back-end server.

SAP Fiori Architecture

SAP Fiori launchpad - UX

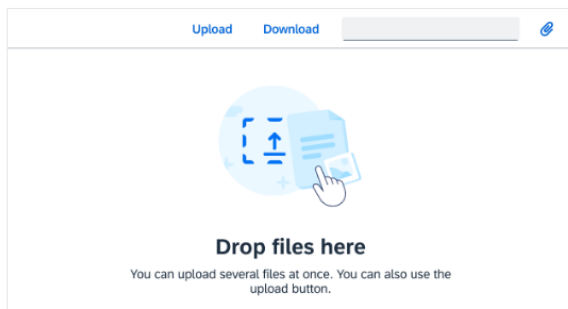


See Ex. 14 at 17, https://kupdf.net/download/sap-fiori-ux-architecture-for-s4h_5908c09edc0d60825d959e7a_pdf.

121. The SAP Fiori launchpad provides additional services such as navigation, personalization (rearrange or move tiles and links, add a group or applications), upload collection control, embedded help, bookmarking, app configuration, notifications, usage analytics, and user info. For instance, users are able to upload multiple files from any device (desktops, tablets, or phones) to an SAP Fiori application. They also can easily select one or multiple files from their computer and drag them onto the upload collection to start the upload.

Empty State

If empty, the upload set provides a hint to use the *Upload* button or drag and drop to upload files. This hint already provides a large enough zone for users to drop their files.



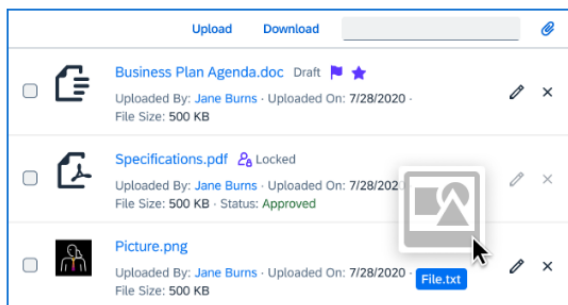
Interaction - No items

Drag and Drop

Users can easily select one or multiple files from their computer and drag them onto the upload set to start the upload.

As the user hovers over the drop zone, a border appears around the upload set to indicate that the file can be released.

The upload process itself is the same as if a file had been added via the *Upload* button.



Interaction - Drag and drop

See Ex. 15 at 4-5, <https://experience.sap.com/fiori-design-web/upload-set/>.

The first step we need to do is make the list drag-able, you can do this with the following code:

```
oSortableList.onAfterRendering = function() {
    if (sap.m.List.prototype.onAfterRendering) {
        sap.m.List.prototype.onAfterRendering.apply(this);
    }
    $("#"+listUIId+" li").draggable({
        helper: "clone"
    });
}
```

See Ex. 16 at 4, <https://community.sap.com/t5/technology-blogs-by-members/how-to-use-drag-and-drop-between-two-sapui5-ui-elements/ba-p/13139835>.

When the drop event is triggered, we can access the ID of our list item which we have dropped on the table. With this ID we can access the list item, retrieve the binding context and the path. And with this path we can read out the correct line from our material data. We then add this data as an item to our table.

And that's how easy it is to implement drag and drop functionalities in SAPUI5.

See id. at 5.

122. Cyandia is informed and believes that SAP was aware of the '641 Patent, and has done nothing to curtail its infringement.

123. Cyandia is informed and believes that SAP has undertaken no efforts to avoid infringement of the '641 Patent, despite its knowledge and understanding that SAP's products and services infringe the '641 Patent. As such, SAP has acted and continues to act recklessly, willfully, wantonly, deliberately, and egregiously in infringement of the '641 Patent, justifying an award to Cyandia of increased damages under 35 U.S.C. § 284 and attorneys' fees and costs incurred under 35 U.S.C. § 285.

124. SAP's infringement of the '641 Patent has injured and continues to injure Cyandia in an amount to be proven at trial, but not less than a reasonable royalty.

125. Cyandia is entitled to damages and any other relief in accordance with 35 U.S.C. §§ 284 and 285.

SIXTH CAUSE OF ACTION
(Indirect Infringement of the '641 Patent)

126. Cyandia repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.

127. SAP has induced and continues to induce infringement of claims of the '641 Patent, including Claim 1, under 35 U.S.C. § 271(b).

128. SAP has had knowledge of the '641 Patent and has actively and knowingly aided and abetted infringement by others, including customers, users and/or vendors

129. Specifically, SAP's actions that aided and abetted others to infringe, include instructing, directing and/or requiring its customers, users, and/or vendors to perform one or more steps of the method claims, or provide one or more components of a system or computer-readable medium claim, either literally or under the doctrine of equivalents. All the elements of the claims are used by either SAP, its customers, users, and vendors, or some combination thereof. SAP has known or has been willfully blind to the fact that it is inducing others by practicing, either themselves or in conjunction with SAP, claims of the '641 Patent, including Claim 1.

130. In particular, SAP has knowingly and actively aided and abetted the direct infringement of the '641 Patent by instructing and encouraging its customers, users, and vendors to meet the elements of the '641 Patent with the '641 Accused Products. Such use is consistent with how the '641 Accused Products are described to directly infringe the '641 Patent and how they are intended to be used, as described above and incorporated by reference here. SAP's specific intent to encourage infringement includes, but is not limited to: (a) advising its customers and users to use the '641 Accused Products in an infringing manner through direct communications via training, support services, or sales calls, thereby providing a

mechanism through which third parties may infringe; (b) advertising and promoting the use of the '641 Accused Products in an infringing manner; (c) and distributing guidelines and instructions on how to setup the '641 Accused Products in an infringing manner. *See, e.g.*, Ex. 17, https://www.tutorialspoint.com/sap_fiori/sap_fiori_security.htm. To the extent SAP's customers, users, and vendors direct and control the systems and methods in the claims, SAP obtains benefits from the control of the system as a whole. SAP and its customers, users, and vendors put the systems and methods described in the claims into service to the benefit of SAP's ability to provide a user-centered design so that the user can access secured relevant information and applications via multiple devices.

131. SAP updates and maintains a support website that includes technical documentation encouraging the use of the '641 Accused Products in an infringing manner. Example technical documentation includes knowledge articles, videos, user guides, technical support articles, and a knowledge center. The technical documentation covers the operation of the '641 Accused Products in-depth, including by advertising the '641 Accused Products' infringing features and instructing customers, users, and vendors to configure and use the '641 Accused Products in an infringing manner. *See, e.g.*, Ex. 17. https://www.tutorialspoint.com/sap_fiori/sap_fiori_security.htm.

132. SAP engaged in such actions with specific intent to cause infringement or with willful blindness to the resulting infringement given that SAP had actual knowledge of the '641 Patent and knowledge that its acts were inducing infringement of the '641 Patent.

133. SAP is entitled to damages and any other relief in accordance with 35 U.S.C. §§ 284 and 285.

SEVENTH CAUSE OF ACTION
(Direct Infringement of the '948 Patent)

134. Cyandia repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.

135. SAP has infringed and continues to infringe claims of the '948 Patent, including Claim 35.

136. SAP's infringement is based upon literal infringement or infringement under the doctrine of equivalents, or both.

137. SAP's acts of making, using, importing, selling, and/or offering for sale infringing products and services have been without the permission, consent, authorization, or license of Cyandia.

138. SAP's infringement includes, but is not limited to, the manufacture, use, sale, importation and/or offer for sale of products and services incorporating Cyandia's technology covered by the '948 Patent, including, but not limited to, products and services, such as the SAP Fiori User Experience (UX) platform, offering the SAP Fiori launchpad and applications (the " '948 Accused Products"). The '948 Accused Products embody the patent invention of the '948 Patent and infringe the '948 Patent because they utilize a combination of features that collectively practiced each limitation of claim 35 of the '948 Patent. SAP is responsible for sales, marketing, distribution related to its infringing product and service, the SAP Fiori User Experience (UX) platform for SAP software and applications. In particular, the SAP Fiori launchpad feature provides a user-centered design so that the user can access secured relevant information and applications via multiple devices. For instance, the user may receive color coding alerts for any overdue, new or immediate actions.

SAP Fiori Architecture

SAP Fiori launchpad – User Experience

The screenshot displays the SAP Fiori launchpad interface for an 'Internal Sales Representative'. The interface is organized into a grid of tiles. Callouts on the left side point to various features: 'Anchor navigation allows direct access to groups' (pointing to the top navigation bar), 'Edit mode for instant personalization of groups and tiles' (pointing to the grid layout), 'Launch SAPUI5, Web Dynpro ABAP*, SAP GUI for HTML* and arbitrary URLs' (pointing to the overall interface), 'Link lists provide access to a large number of apps' (pointing to a 'My Sales Order' tile), and 'Group tiles for personalized content organization' (pointing to a 'Working Space' section). Callouts on the right side point to: 'Search across and within apps to get immediate answers' (pointing to the search icon), 'News and feeds to enhance collaboration' (pointing to a 'Credit Limit increases to USD 40K' notification), 'Color coding alerts user for any overdue, new or immediate actions' (pointing to a 'Declined: Sales Order #126636' notification), and 'Dynamic charts to provide high level, real-time overview' (pointing to a 'Wind Map' chart). At the bottom, there is a note '*on selected devices' and a footer with copyright information and a page number '19'.

See Ex. 19 at 19, <https://www.readkong.com/page/sap-fiori-architecture-overview-to-deep-dive-with-focus-6811873?p=2>.

139. The '948 Patent allows multiple channels to be configured and implemented, through which information relevant to a given user is presented for user interaction via one or more user platforms associated with the user. A user profile is established identifying user preferences and one or more platform identifies. The user profile is managed to grant the user access to specific ones of the multiple channels.

140. In particular, the SAP Fiori launchpad feature provides a set of multiple applications that are used in regular business functions, that allows users to interact with multiple information forms across multiple types of computing devices and platforms, including but not limited to, various smartphones, tablets, laptops, or desktop computers.

SAP Fiori



See Ex. 5 at 2, https://www.tutorialspoint.com/sap_fiori/sap_fiori_tutorial.pdf.

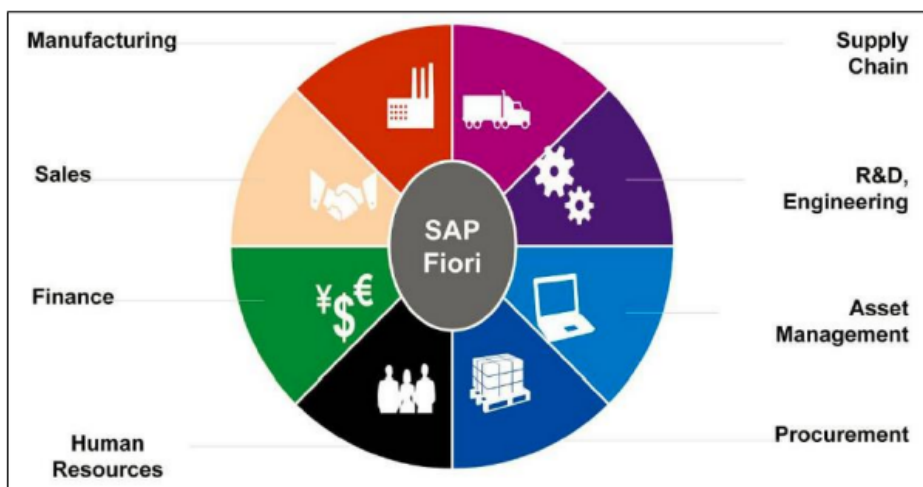
141. The Fiori launchpad is based on some architectural principles, including but not limited to:

- a Central Access to applications through the SAP Fiori launchpad –

1. SAP Fiori – Introduction

SAP Fiori is a new user experience (UX) for SAP software and applications. It provides a set of applications that are used in regular business functions like work approvals, financial apps, calculation apps and various self-service apps.

SAP Fiori provides 300+ role-based applications like HR, Manufacturing, finance, etc. When you open the SAP Fiori home page application, you will see a picture of the flowers. It is because Fiori means 'flowers' in Italian.



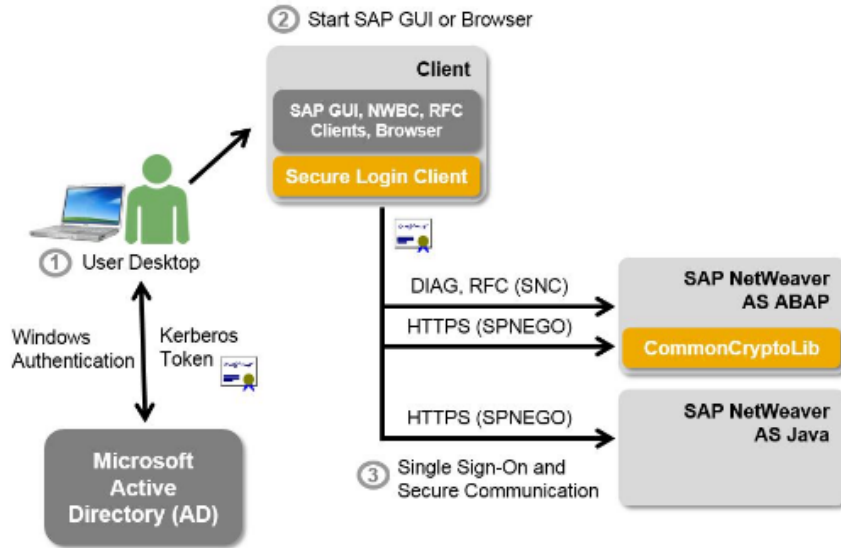
SAP Fiori provides all business roles in real time on compatible hand devices. It offers business roles on easy to use functions, simple with unmatched responsiveness on desktop, smartphones and Tablets.

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.

See Ex. 5 at 1, https://www.tutorialspoint.com/sap_fiori/sap_fiori_tutorial.pdf.

- a Security with Single Sign-On (SSO) as well as role-based authentication and authorization – see below examples of Authentication Methods:
 - (1) Spnego /Kerberos:

Single Sign-On Based on Kerberos / SPNEGO

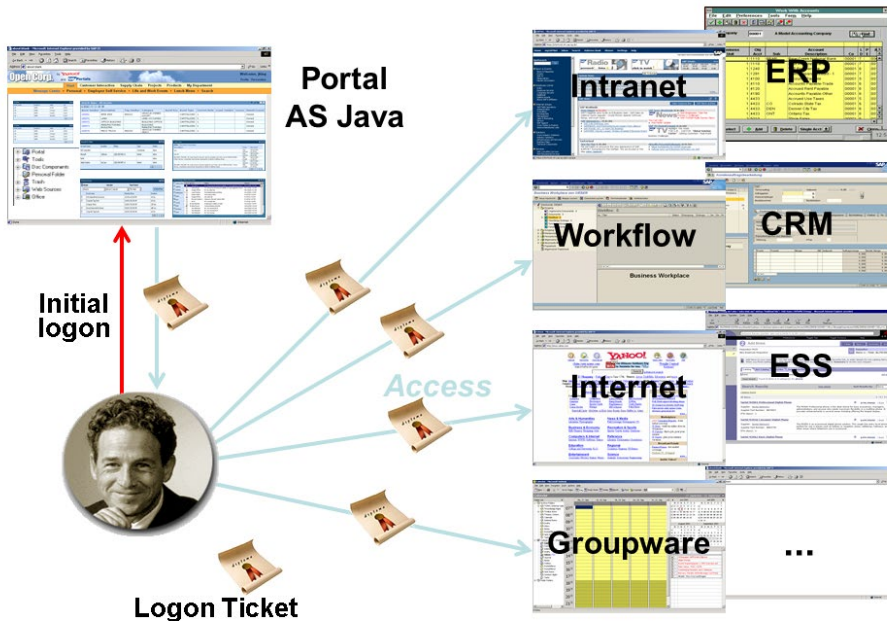


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See Ex. 8 at 2, <https://community.sap.com/t5/technology-blogs-by-sap/sap-single-sign-on-authenticate-with-kerberos-spnego/ba-p/13321445>.

(2) SAP Logon Tickets:

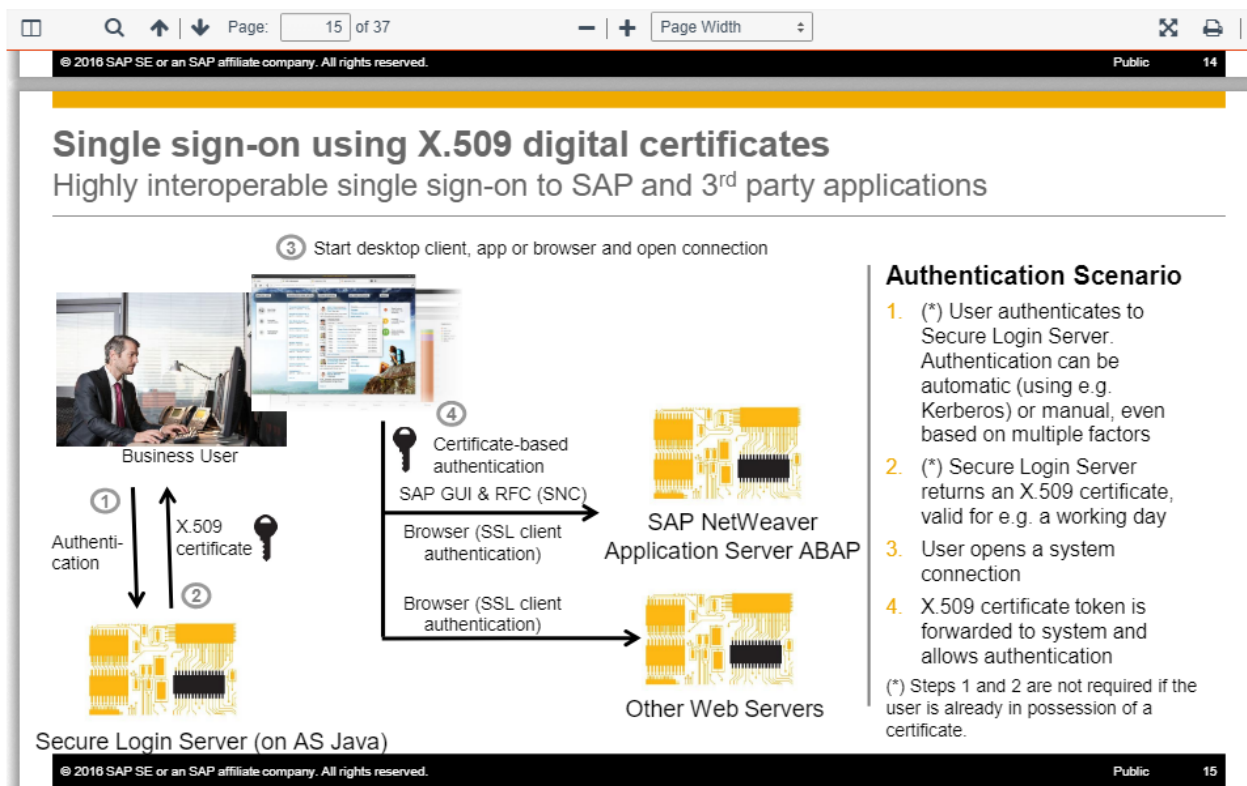
For an overview of the authentication process when using logon tickets, see the figure below.



See Ex. 9 at 2,

https://help.sap.com/saphelp_ewm900/helpdata/en/43/9d7bb1e08021b5e10000000a1553f6/content.htm?no_cache=true.

(3) X.509 Certificates:



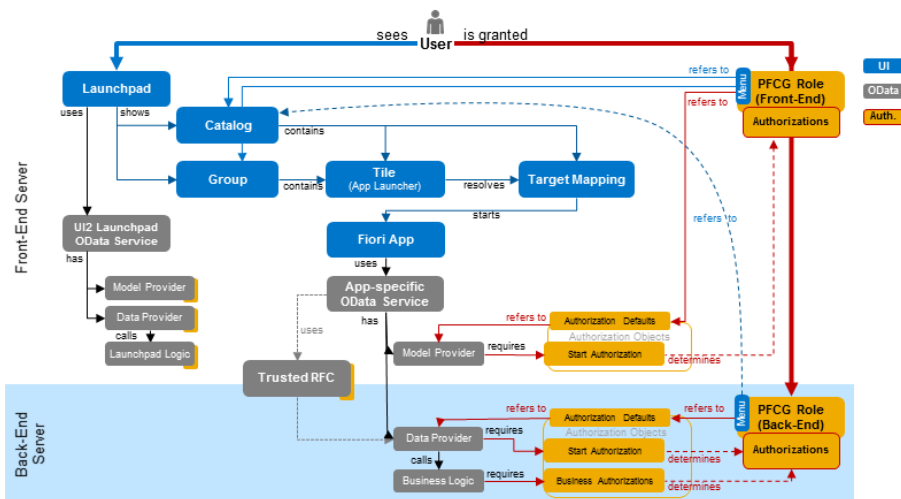
See Ex. 10 at 15, <https://docplayer.net/15973578-Sap-single-sign-on-2-0-overview-presentation.html>.

- an Open Data Protocol (OData), which facilitates secure provisioning and data consumption. In particular, the SAP Netweaver Gateway, also called SAP Gateway, relying on OData, enables SAP applications to share data with a wide range of devices, technologies, and platforms in a way that is easy to understand and consume. Using Odata helps the users to access SAP data from anywhere and from any device.

Dependencies between SAP Fiori UI Entities, OData Services, and Authorizations

The following figure shows the dependencies between the entities:

- The SAP Fiori UI entities that define which SAP Fiori apps are displayed to the user
- The OData services that retrieve the dynamic data to be displayed from the business logic for the SAP Fiori apps
- The authorizations required to start and to use the business logic of the SAP Fiori apps. These authorizations are defined by the OData services.

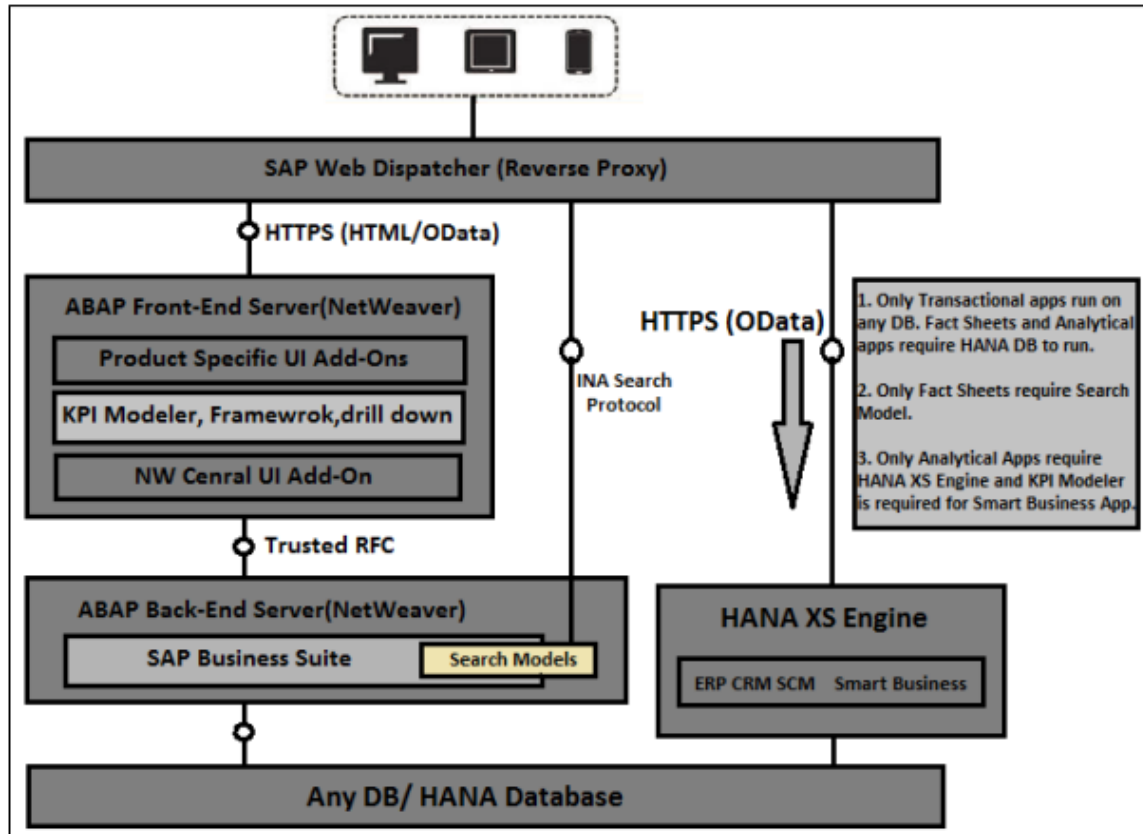


See Ex. 11 at 2,

https://help.sap.com/docs/FIORI_TECHNOLOGY/f3e3a9ffe47f4c039ebd1546747288f2/3c49e1a27806488689b2ad7c67e77291.html.

142. The SAP Fiori launchpad can be used on various devices because a reverse proxy server, to wit, SAP Web Dispatcher, is installed. The SAP Web Dispatcher is mandatory for some SAP Fiori Applications.

143. This reverse proxy server, or SAP Web Dispatcher, handles all web browser requests from end servers via mobile devices or laptops. It can reject or accept connection to SAP Fiori launchpad or system.

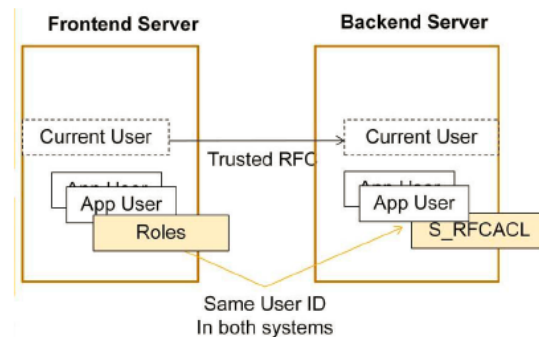


See Ex. 5 at 9, https://www.tutorialspoint.com/sap_fiori/sap_fiori_tutorial.pdf; see also Ex. 13 at 1, https://www.tutorialspoint.com/sap_fiori/sap_fiori_data_flow.htm.

144. To host and provide SAP Fiori application content to the user, the SAP ABAP front-end server must contain all the User Interface (UI) components of the Fiori system and SAP NetWeaver Gateway (a set of ABAP add-ons), while the SAP ABAP Back-End Server hosts the SAP business applications for which the SAP Fiori apps have been created. Further, a database (such as SAP HANA database) is required to store the corresponding business data. While launching SAP Fiori application, the request is sent to the ABAP front-end server by the SAP Fiori Launchpad via Web Dispatcher. ABAP front-end server authenticates the user when this request is sent. To authenticate the user, the ABAP front-end server uses the authentication and single sign-on (SSO) mechanisms provided by SAP NetWeaver. NetWeaver Gateway is used to set up the connection to back-end server by creating OData

service. Spengo/Kerberos, SAP Logon Tickets and X.509 Certificates are mechanisms that can be used for authentication.

145. To host and provide SAP Fiori application content to the user, the SAP ABAP. Once initial authentication is done on the ABAP front-end server, a security session is established between the user and the ABAP front-end server. This allows SAP Fiori apps and launchpad to send OData requests (used for querying and updating data over HTTP) to the ABAP back-end server. These requests are communicated securely by using trusted RFC. The user places request via Web browser using HTTPS. Trusted RFC is used to communicate between ABAP Front-End and Back-End Server. Trusted RFC connections are only safe if a strong authorization concept “S_RFCACL” is implemented.



The connection between front-end server to back-end server must be trusted RFC connection. It means same ID is authenticated to back-end system without entering the password. As mentioned earlier, the user Id should have **S_RFCACL** authorization for trusted logon.

A User should have UI roles assigned in Front-end server and back-end roles in back-end server.

See Ex. 13 at 2-3, https://www.tutorialspoint.com/sap_fiori/sap_fiori_data_flow.htm.

146. The SAP Fiori launchpad hosts a number of SAP Fiori Applications, which run on various devices. The SAP applications can be visualized as tiles. All tiles have one click area that opens the corresponding application. The applications are organized through catalogs and groups.

Intro

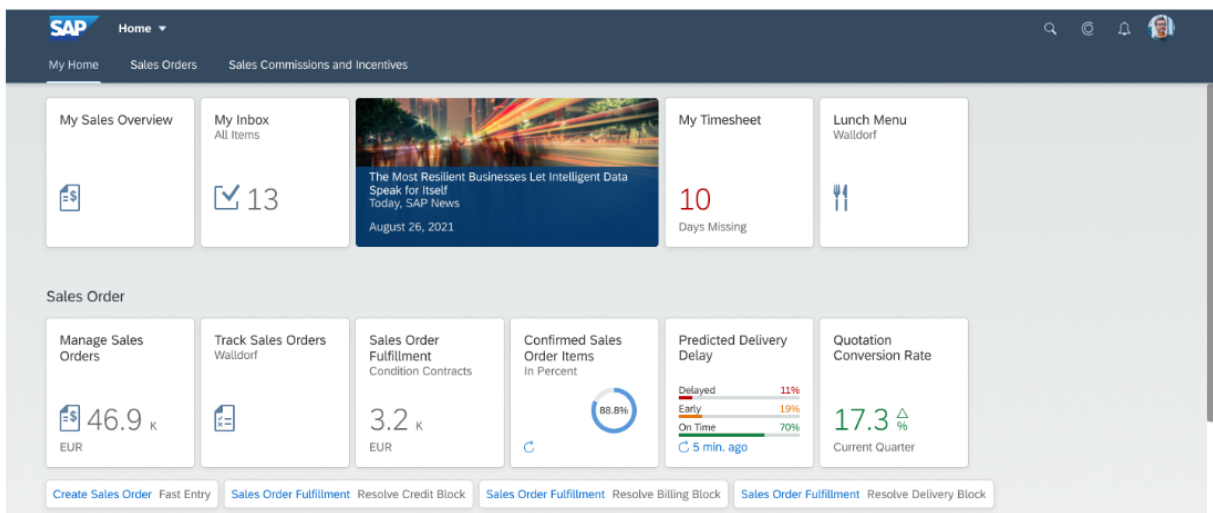
A tile is a container that represents an app on the [SAP Fiori launchpad home page](#).

Tiles can display different types of content, which is based on data supplied by the app. They can contain an icon, a title, an informative text, KPIs, counters, and charts.

A **link** is a special representation of a tile. Links are displayed in a separate area below the tiles area and comprise a title and an optional subtitle. Most tile types can be converted to links, and links can be converted to tiles at any time.

Users can personalize their home page by selecting the tiles for the apps they want to use from the [app finder](#). The apps available in the app finder depend on the user's role.

The number of visible tiles on the launchpad home page depends on the screen resolution. If the tiles in a group do not fit in one row, they are wrapped to the next row.



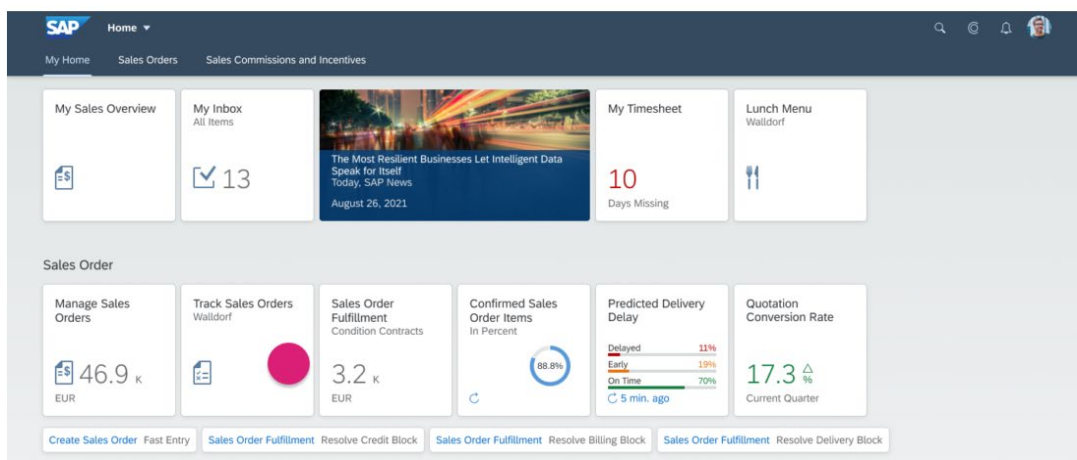
See Ex. 6 at 1-2, <https://experience.sap.com/fiori-design-web/tile/#>.

Behavior and Interaction

All tiles on the [SAP Fiori launchpad](#) support one click event and one navigation target.

[Open App](#)

All tiles have one click area that opens the corresponding app.



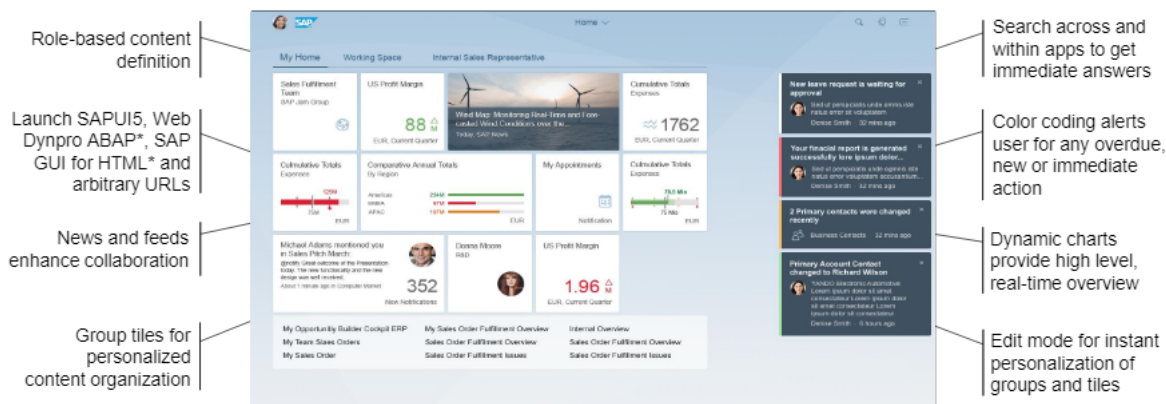
Tile - Interaction

See *id.* at 13-14.

147. The SAP Fiori launchpad presents different views to users based on the roles assigned to them and any personalizations. A user should have UI roles assigned in front-end server, and back-end roles in back-end server.

SAP Fiori Architecture

SAP Fiori launchpad - UX

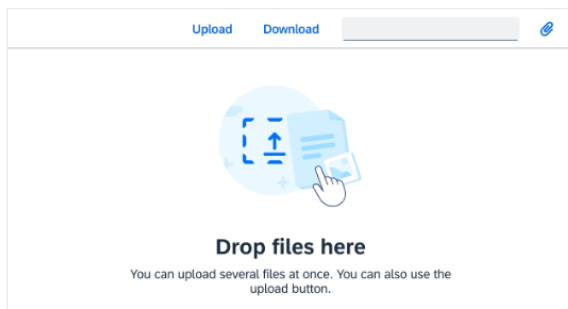


See Ex. 14 at 17, https://kupdf.net/download/sap-fiori-ux-architecture-for-s4h_5908c09edc0d60825d959e7a_pdf.

148. The SAP Fiori launchpad provides additional services such as navigation, personalization (rearrange or move tiles and links, add a group or applications), upload collection control, embedded help, bookmarking, app configuration, notifications, usage analytics, and user info. For instance, users are able to upload multiple files from any device (desktops, tablets, or phones) to an SAP Fiori application. They also can easily select one or multiple files from their computer and drag them onto the upload collection to start the upload.

Empty State

If empty, the upload set provides a hint to use the *Upload* button or drag and drop to upload files. This hint already provides a large enough zone for users to drop their files.



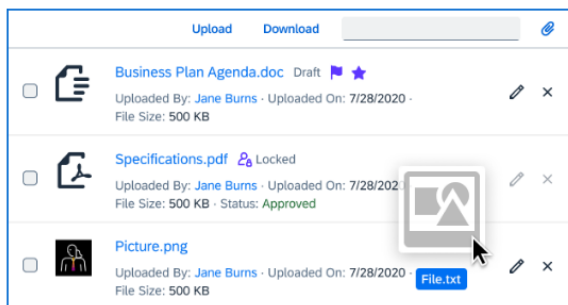
Interaction - No items

Drag and Drop

Users can easily select one or multiple files from their computer and drag them onto the upload set to start the upload.

As the user hovers over the drop zone, a border appears around the upload set to indicate that the file can be released.

The upload process itself is the same as if a file had been added via the *Upload* button.



Interaction - Drag and drop

See Ex. 15 at 4-5, <https://experience.sap.com/fiori-design-web/upload-set/>.

The first step we need to do is make the list drag-able, you can do this with the following code:

```
oSortableList.onAfterRendering = function() {
    if (sap.m.List.prototype.onAfterRendering) {
        sap.m.List.prototype.onAfterRendering.apply(this);
    }
    $("#"+listUIId+" li").draggable({
        helper: "clone"
    });
}
```

See Ex. 16 at 4, <https://community.sap.com/t5/technology-blogs-by-members/how-to-use-drag-and-drop-between-two-sapui5-ui-elements/ba-p/13139835>.

When the drop event is triggered, we can access the ID of our list item which we have dropped on the table. With this ID we can access the list item, retrieve the binding context and the path. And with this path we can read out the correct line from our material data. We then add this data as an item to our table.

And that's how easy it is to implement drag and drop functionalities in SAPUI5.

See id. at 5.

149. Cyandia is informed and believes that SAP was aware of the '948 Patent, and has done nothing to curtail its infringement.

150. Cyandia is informed and believes that SAP has undertaken no efforts to avoid infringement of the '948 Patent, despite its knowledge and understanding that SAP's products and services infringe the '948 Patent. As such, SAP has acted and continues to act recklessly, willfully, wantonly, deliberately, and egregiously in infringement of the '948 Patent, justifying an award to Cyandia of increased damages under 35 U.S.C. § 284 and attorneys' fees and costs incurred under 35 U.S.C. § 285.

151. SAP's infringement of the '948 Patent has injured and continues to injure Cyandia in an amount to be proven at trial, but not less than a reasonable royalty.

152. Cyandia is entitled to damages and any other relief in accordance with 35 U.S.C. §§ 284 and 285.

EIGHTH CAUSE OF ACTION
(Indirect Infringement of the '948 Patent)

153. Cyandia repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.

154. SAP has induced and continues to induce infringement of claims of the '948 Patent, including Claim 35, under 35 U.S.C. § 271(b).

155. SAP has had knowledge of the '948 Patent and has actively and knowingly aided and abetted infringement by others, including customers, users and/or vendors.

156. Specifically, SAP's actions that aided and abetted others to infringe, include instructing, directing and/or requiring its customers, users, and/or vendors to perform one or more steps of the method claims, or provide one or more components of a system or computer-readable medium claim, either literally or under the doctrine of equivalents. All the elements of the claims are used by either SAP, its customers, users, and vendors, or some combination thereof. SAP has known or has been willfully blind to the fact that it is inducing others by practicing, either themselves or in conjunction with SAP, claims of the '948 Patent, including Claim 35.

157. In particular, SAP has knowingly and actively aided and abetted the direct infringement of the '948 Patent by instructing and encouraging its customers, users, and vendors to meet the elements of the '948 Patent with the '948 Accused Products. Such use is consistent with how the '948 Accused Products are described to directly infringe the '948 Patent and how they are intended to be used, as described above and incorporated by reference here. SAP's specific intent to encourage infringement includes, but is not limited to: (a) advising its customers and users to use the '948 Accused Products in an infringing manner through direct communications via training, support services, or sales calls, thereby providing a

mechanism through which third parties may infringe; (b) advertising and promoting the use of the '948 Accused Products in an infringing manner; (c) and distributing guidelines and instructions on how to setup the '948 Accused Products in an infringing manner. *See, e.g.*, Ex. 17, https://www.tutorialspoint.com/sap_fiori/sap_fiori_security.htm. To the extent SAP's customers, users, and vendors direct and control the systems and methods in the claims, SAP obtains benefits from the control of the system as a whole. SAP and its customers, users, and vendors put the systems and methods described in the claims into service to the benefit of SAP's ability to provide a user-centered design so that the user can access secured relevant information and applications via multiple devices. Cyandia contacted SAP on or about February 7, 2024, regarding a potential license to Cyandia's patents, serving as a written notification of SAP's likely infringement of at least the '250, '285, '641 and '948 Patents. Ex. 7.

158. SAP updates and maintains a support website that includes technical documentation encouraging the use of the '948 Accused Products in an infringing manner. Example technical documentation includes knowledge articles, videos, user guides, technical support articles, and a knowledge center. The technical documentation covers the operation of the '948 Accused Products in-depth, including by advertising the '948 Accused Products' infringing features and instructing customers, users, and vendors to configure and use the '948 Accused Products in an infringing manner. *See, e.g.*, Ex. 17, https://www.tutorialspoint.com/sap_fiori/sap_fiori_security.htm.

159. SAP engaged in such actions with specific intent to cause infringement or with willful blindness to the resulting infringement given that SAP had actual knowledge of the '948 Patent and knowledge that its acts were inducing infringement of the '948 Patent.

160. SAP is entitled to damages and any other relief in accordance with 35 U.S.C. §§ 284 and 285.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff Cyandia prays for relief and judgment as follows:

- (A) An entry of judgment holding that SAP has infringed and is infringing the Asserted Patents;
- (B) An entry of judgment that the Asserted Patents are valid and enforceable;
- (C) A permanent injunction against SAP and its officers, employees, agents, servants, attorneys, instrumentalities, and/or those in privity with them, from infringing the Asserted Patents;
- (D) An award to Cyandia of such damages as it shall prove at trial against SAP that is adequate to fully compensate Cyandia for SAP's infringement of the Asserted Patents;
- (E) A determination that the damages against SAP be trebled or for any other basis within the Court's discretion pursuant to 35 U.S.C. § 284;
- (F) A finding that this case is "exceptional" and an award to Cyandia of its costs and reasonable attorneys' fees, as provided by 35 U.S.C. § 285;
- (G) An accounting of all infringing sales and revenues, together with post judgment interest and prejudgment interest from the first date of infringement of the Asserted Patents;
- (H) Such further and other relief as the Court may deem proper and just.

Respectfully submitted,

Dated: February 12, 2024

By: /s/ Elizabeth L. DeRieux

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