
METHOD AND SYSTEM FOR DISPLAYING SERVICE IN MULTI-SCREEN INTERACTION SCENARIO ON CLIENT

TECHNICAL FIELD OF THE INVENTION

[0001] The present invention relates to the field of multi-screen interaction, and in particular to a method and system for displaying service in multi-screen interaction scenario on client.

BACKGROUND OF THE INVENTION

[0002] With the development of terminal technologies, particularly rapid popularization of mobile terminals such as smart phones, tablet computers, and smart TVs, the multi-screen interaction technology has been applied more and more broadly, which makes it true to perform media content sharing and interoperation between different screens through a network connection. Current multi-screen interaction protocols include DLNA, AirPlay, Miracast, some private protocols for implementing multi-screen interaction etc..

[0003] In multi-screen application scenarios of various protocols, there will be a variety of services such as media resource services, media play services, and there will also be a client to discover and acquire services. The current multi-screen interaction protocols per se and dominant multi-screen applications in the market do not consider how to present services at a client, which involves whether a user can find his/her desired service more accurately and quickly when there are too many media services, because a mobile phone and a tablet have limited screen spaces, while a smart TV is not appropriate to present too many contents once due to the requirement of viewing in a long distance.

[0004] In view of the above, it is a main problem to be solved by the present invention regarding how to develop a method and system for presenting services at a client in a multi-screen interaction scenario, which causes the client to intelligently sort the services obtained in a local area network without changing the multi-screen interaction protocol per se, so as to achieve a better user experience especially when a relatively large number of services are acquired by the client.

SUMMARY OF THE INVENTION

[0005] An objective of the present invention is to introduce a mechanism of analysis on user's behavior in a multi-screen interaction scenario, such that the client performs an intelligent sorting on the obtained services in the local area network without changing the original multi-screen interaction protocol per se, so as to achieve a better user experience especially when a relatively large number of services are obtained by the client.

[0006] In order to achieve the above objective, in one aspect, the present invention provides a method for displaying service in multi-screen interaction scenario on client, the method comprises steps of:

[0007] monitoring operational behaviors of a multi-screen interaction client;

[0008] performing analysis according to the monitored operational behaviors of the multi-screen interaction client to obtain preference degrees of the multi-screen interaction client with respect to different services;

[0009] updating a list of service preference degrees based on the obtained preference degrees of the multi-screen interaction client with respect to different services;

[0010] sorting service information in the list of service preference degrees and presenting to a user.

[0011] In another aspect, the present invention provides a system for displaying service in multi-screen interaction scenario on client, the system comprises:

[0012] an acquiring module configured to monitor operational behaviors of the multi-screen interaction client;

[0013] an analyzing module configured to perform analysis according to the monitored operational behaviors of the multi-screen interaction client to obtain preference degrees of the multi-screen interaction client with respect to different services;

[0014] a storage module configured to update a list of service preference degrees based on the obtained preference degrees of the multi-screen interaction client

with respect to different services;

[0015] a presenting module configured to sort service information in the list of service preference degrees and presenting to the user.

[0016] As compared with the prior art, the present invention has the following advantages:

[0017] 1. By introducing a mechanism of the analysis on user's behavior, the embodiments of the present invention enable the client to perform an intelligent sorting on the obtained services in the local area network, so as to achieve a better user experience especially when a relatively large number of services are obtained by the client;

[0018] 2. The present invention does not change the standard multi-screen interaction protocol per se, such that it may flexibly expand various kinds of multi-screen protocols;

[0019] 3. Simple structure, easy implementation, modularized design and easy expansion.

BRIEF DESCRIPTION OF THE DRAWINGS

[0020] Fig. 1 illustrates a frame diagram of a system for presenting services at a client in a multi-screen interaction scenario according to an embodiment of the present invention;

[0021] Fig. 2 illustrates a flow diagram of generating preference degree data of services in a method for presenting the services at a client in a multi-screen interaction scenario according to an embodiment of the present invention;

[0022] Fig. 3 illustrates a flow diagram of sorting the preference degree data of services in a method for presenting the services at a client in a multi-screen interaction scenario according to an embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0023] Hereinafter, the technical solutions of the present invention will be described in further detail through the accompanying drawings and embodiments.

METHOD AND SYSTEM FOR DISPLAYING SERVICE IN MULTI-SCREEN INTERACTION SCENARIO ON CLIENT

TECHNICAL FIELD

[0001] The present invention relates to the field of multi-screen interaction, and in particular to a method and system for displaying service in multi-screen interaction scenario on client.

BACKGROUND

[0002] With the development of terminal technologies, particularly rapid popularization of mobile terminals such as smart phones, tablet computers, and smart TVs, the multi-screen interaction technology has been applied more and more broadly, which makes it true to perform media content sharing and interoperation between different screens through a network connection. Current multi-screen interaction protocols include DLNA, AirPlay, Miracast, some private protocols for implementing multi-screen interaction etc.

[0003] In multi-screen application scenarios of various protocols, there will be a variety of services such as media resource services, media play services, and there will also be a client to discover and acquire services. The current multi-screen interaction protocols per se and dominant multi-screen applications in the market do not consider how to present services at a client, which involves whether a user can find his/her desired service more accurately and quickly when there are too many media services, because a mobile phone and a tablet have limited screen spaces, while a smart TV is not appropriate to present too many contents once due to the requirement of viewing in a long distance.

[0004] In view of the above, it is a main problem to be solved regarding how to develop a method and system for presenting services at a client in a multi-screen interaction scenario, which causes the client to intelligently sort the services obtained in a local area network without changing the multi-screen interaction protocol per se, so as to achieve a better user experience especially when a relatively large number of services are acquired by the client.

SUMMARY

[0004a] The invention is defined in the independent claim. Some optional features of the invention are defined in the dependent claims.

[0005] The method and system disclosed herein introduce a mechanism of analysis on user's behavior in a multi-screen interaction scenario, such that the client performs an intelligent sorting on the obtained services in the local area network without changing the original multi-screen interaction protocol per se, so as to achieve a better user experience especially when a relatively large number of services are obtained by the client.

[0006] In one aspect, the present invention provides a method for displaying service in multi-screen interaction scenario on client, the method comprises steps of:

[0007] monitoring operational behaviors of a multi-screen interaction client;

[0008] performing analysis according to the monitored operational behaviors of the multi-screen interaction client to obtain preference degrees of the multi-screen interaction client with respect to different services;

[0009] updating a list of service preference degrees based on the obtained preference degrees of the multi-screen interaction client with respect to different services;

[0010] sorting service information in the list of service preference degrees and presenting to a user.

[0011] In another aspect, the present invention provides a system for displaying service in multi-screen interaction scenario on client, the system comprises:

[0012] an acquiring module configured to monitor operational behaviors of the multi-screen interaction client;

[0013] an analyzing module configured to perform analysis according to the monitored operational behaviors of the multi-screen interaction client to obtain preference degrees of the multi-screen interaction client with respect to different services;

[0014] a storage module configured to update a list of service preference degrees based on the obtained preference degrees of the multi-screen interaction client

with respect to different services;

[0015] a presenting module configured to sort service information in the list of service preference degrees and presenting to the user.

[0016] As compared with the prior art, the present method and system have the following advantages:

[0017] 1. By introducing a mechanism of the analysis on user's behavior, the embodiments of the present invention enable the client to perform an intelligent sorting on the obtained services in the local area network, so as to achieve a better user experience especially when a relatively large number of services are obtained by the client;

[0018] 2. The system and method do not change the standard multi-screen interaction protocol per se, such that it may flexibly expand various kinds of multi-screen protocols;

[0019] 3. Simple structure, easy implementation, modularized design and easy expansion.

BRIEF DESCRIPTION OF THE DRAWINGS

[0020] Fig. 1 illustrates a frame diagram of a system for presenting services at a client in a multi-screen interaction scenario according to an embodiment of the present invention;

[0021] Fig. 2 illustrates a flow diagram of generating preference degree data of services in a method for presenting the services at a client in a multi-screen interaction scenario according to an embodiment of the present invention;

[0022] Fig. 3 illustrates a flow diagram of sorting the preference degree data of services in a method for presenting the services at a client in a multi-screen interaction scenario according to an embodiment of the present invention.

DETAILED DESCRIPTION

[0023] Hereinafter, the technical solutions of the method and system will be described in further detail through the accompanying drawings and embodiments.