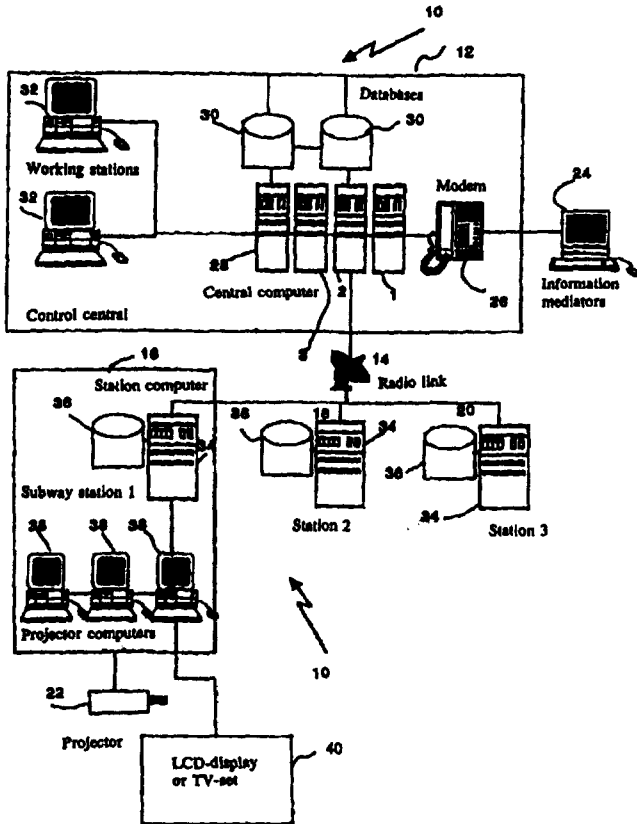


<p>(51) International Patent Classification <sup>6</sup> : <b>G09F 19/18</b></p>	<p><b>A1</b></p>	<p>(11) International Publication Number: <b>WO 97/41546</b> (43) International Publication Date: 6 November 1997 (06.11.97)</p>
<p>(21) International Application Number: PCT/SE97/00684 (22) International Filing Date: 23 April 1997 (23.04.97) (30) Priority Data: 9601603-5 26 April 1996 (26.04.96) SE 08/676,517 2 July 1996 (02.07.96) US 9700250-5 29 January 1997 (29.01.97) SE (71) Applicant (for all designated States except US): DAHLGREN, HYLIN, JONASON MEDIA AB [SE/SE]; Jägarbacken 12, S-182 35 Danderyd (SE). (72) Inventors; and (75) Inventors/Applicants (for US only): HYLIN, Mats [SE/SE]; Jägarbacken 12, S-182 35 Danderyd (SE). DAHLGREN, Mats [SE/SE]; Erik Dahlbergsgatan 9A, S-254 38 Helsingborg (SE). JONASON, Joakim [SE/SE]; Stjärnvägen 19, S-181 34 Lidingö (SE). (74) Agents: ONN, Thorsten et al.; AB Stockholms Patentbyrå, Zacco &amp; Bruhn (publ), P.O. Box 23101, S-104 35 Stockholm (SE).</p>	<p>(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i></p>	

(54) Title: DIGITAL INFORMATION SYSTEM

(57) Abstract

The invention relates to a digital information system (10) for displaying information on at least one display means with the aid of at least one projector (22). The exposures are presented at places accessible to and frequented by a general public. The information system (10) includes external information mediators (24) and information is controlled dynamically through the medium of a communication interface (14) and through the medium of an exposure handler in a central computer (28). The inventive system also includes a communication interface (14) against an elective number of station computers (34) having connected projector computers (38) which control projectors (22) for displaying pictures or exposures. The station computers (34) and peripheral equipment are situated at mutually distanced places. According to one particular field of use, the places mentioned are subway stations (16, 18, 20) and projectors (22) project exposures or pictures onto display means positioned at selected places in the stations (16, 18, 20).



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## DIGITAL INFORMATION SYSTEM

### TECHNICAL FIELD

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The present invention relates to a method and to apparatus for controlling and coordinating projectors in a digital information system for displaying information on at least one display device through the medium of at least one projector for each said device, said information being displayed in places that are accessible to and/or  
10 frequented by a general public. In one particular aspect, the invention is applied to control projectors for displaying information directed towards people in such places as main railway stations, subway stations, airport waiting lounges, cinemas, private homes etc.

### 15 DESCRIPTION OF THE BACKGROUND ART

Systems that are used to show information in the form of advertisements, timetable messages or arrival and departure times in present-day public service infrastructures with regard to buses, trains, subway traffic, etc., is of a static nature. Such information  
20 is given on notice boards, posters, charts, tables, verbally through loudspeakers, and on digital displays, etc. A characteristic feature of such information media is that the information media is not coordinated, but is in the form of individual items which are controlled and updated separately, often manually.

25 Modern digital displays used, e.g., in conjunction with subway railway traffic gives some of the aforesaid information but is not controlled to display advertisements, warning messages, etc. Furthermore, the information is often supplemented with verbal messages transmitted from traffic control centres. The information channel cannot be subscribed to directly for the display of external information suppliers, such as

advertising bureaux, the authorities, newspapers, etc., but is processed administratively and fed manually into the information display systems.

5 Although the administration of information is often processed manually with the aid of modern computer technology, the available display time will nevertheless contain "dead time", among other things due to back-logging caused by the manual infeed process.

10 Thus, present-day systems do not enable information to be updated dynamically for display in real time. Neither do present-day systems enable external mediators to update information for display in a central control system, nor yet the administrator who makes the display of information available, but that it is the administrator who determines when, where and how the information shall be displayed.

15 The present-day static information display systems are therefore beset with a number of problems.

Also known to the art are systems for displaying or showing picture series in local public places, such as assembly halls, lecture halls, and conference rooms in industry. The systems comprise diapositive projectors which are controlled to display pictures, images and sound in an attractive manner, often with rapid picture changes and overlaps, so as to avoid the risk of boring viewers, as with conventional display with diapositive projectors. The computer control of such systems may well be both complicated and advanced. Unfortunately, these systems are nevertheless static insofar as they are used in one and the same locality and controlled and managed on the display site. The display must be planned carefully beforehand, this planning often being carried out by experts within the technical field in question, so as to obtain a finished display product. For instance, when a company wishes to change its display and introduce a new picture series combined with sound, the process again becomes static by virtue of the need to employ experts to program and arrange the new display.

The same problem as that mentioned above is also met when showing pictures through diapositive projectors in one and the same locality, because the display subscriber has very little chance of influencing the display, especially in real time. The picture display is directed towards a limited public and towards scheduled display of one and the same information material to the public concerned. The picture display is not directed to a large number of people, as in the case of a railway station platform, a subway platform or in airports. In places of this nature, it should be possible to spread the information and to display different information in different places within said stations and it should be possible to update and change the information quickly. When the information displayed on said stations is not effectively coordinated, the displays on which information is presented will often become static, for instance show the time of the next display or show a pause picture, i.e. dead time. This becomes nerve-wracking to travellers, who often wait for long periods in waiting halls or stand on platforms. Neither is the failure to utilize expensive information display equipment to the highest possible degree compatible with good economy.

Further, It is a known problem when new films or movies are to be released at different locations such as cinemas that there are pirate copies made when the movies or films are distributed to the locations where they are going to be displayed to the public.

Still further, the advertisement sent at cinemas during the projection of a film is static, i.e. not instantly changeable.

Also, for advertisement on television the same drawbacks as for other systems are valid e.g. concerning changing of advertisement spots.

## **SUMMARY OF THE INVENTION**

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