

Managing and Setting up Parental Controls of computer system through intelligent agent

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Abstract— This paper discuss the application of intelligent agent in managing the parental controls of computer system automatically. The parental control of the system are major components in network and system configuration. With the help of parental controls the network administrator manage the system accessibility and provide the way to utilize the system resources through prevention of game playing, unwanted software installation.

The intelligent agent application should support the feature of mixed-initiative interaction. In the process of developing the intelligent interactive agent application, the approach of the mixed-initiative reasoning is being applied. The mixed-initiative reasoning supports the mechanism of working the human agent and computational agent together in solving the complex problems. The both type of agent utilize their own reasoning capabilities in problem solving. In this paper we discuss the approach of developing the intelligent agent application for managing parental control system using the BDI architecture.

Keywords— Parental Control, System Configuration, Intelligent agent, BDI architecture.

I. INTRODUCTION

Parental controls are features which may be included in digital television services, computer and video games, mobile devices and software. Parental controls fall into roughly four categories: content filters, which limit access to age inappropriate content; usage controls, which constrain the usage of these devices such as placing time-limits on usage or forbidding certain types of usage; computer usage management tools, which enforces the use of certain software; and, monitoring, which can track location and activity when using the devices.[1] Another feature of parental controls is the ability to blocking rating, such as Parental Advisory, TV-14 and TV-MA for TV, R and NC-17 for MPAA, and M and AO for ESRB.

Content Filters were the first popular type of parental controls to limit access to Internet content. Television stations also began to introduce V-Chip technology to limit access to television content. Modern usage controls are able to restrict a range of explicit content such as explicit songs and movies. They are also able to turn devices off during specific times of the day, limiting the volume output of devices, and with GPS technology becoming affordable, it is now possible to easily locate devices such as mobile phones.

You can keep track of your kids' PC use with Parental Controls—watch this video to see how. (0:54)

In Windows 7 you can set limits on your kids' computer use—and help them be safer online—without constantly peeking over their shoulders.

Parental Controls helps you limit how much computer time children have, as well as which programs and games they can use (and perhaps more importantly, when). With the Parental Controls in **Windows Media Center**, you can also block access to objectionable TV shows and movies

If your computer is connected to a domain, Parental Controls aren't available.

You can use Parental Controls to set limits on the hours that children can use the computer, the types of games they can play, and the programs they can run.

- **Set specific time limits on your children's computer use.** You can set time limits to control when children are allowed to log on to the computer. Time limits prevent children from logging on during specified hours. You can set different logon hours for every day of the week. If they're logged on when their allotted time ends, they'll be automatically logged off..
- **Prevent your children from playing games you don't want them to play.** Control access to games, choose an age-rating level, choose the types of content you want to block, and decide whether you want to allow or block specific games..
- **Keep your children from running specific programs.** Prevent children from running programs that you don't want them to run.

To control when children can use the computer

1. Open Parental Controls by clicking the **Start** button , clicking **Control Panel**, and then, under **User Accounts and Family Safety**, clicking **Set up parental controls for any user**. If you're prompted for an administrator password or confirmation, type the password or provide confirmation.
2. Click the account that you want to set time limits for.
3. Under **Parental Controls**, click **On, enforce current settings**.
4. Click **Time limits**.
5. In the grid, click and drag the hours you want to block or allow

You can use Parental Controls to determine which specific programs your child can use. For example, if you use a program to keep track of your finances, you can prevent your child from opening it and viewing your financial information.

1. Click to open Parental Controls. If you are prompted for an administrator password or confirmation, type the password or provide confirmation.
2. Click the name of the person you want to prevent from using specific programs.
3. Under Parental Controls, click On, enforce current settings.
4. Click Allow and block specific programs.
5. Click Person's name can only use the programs I allow.
6. Select the programs that you want to allow. If the program you want doesn't appear in the list, click Browse to locate the program.

II. APPLICATIONS

With Parental Controls, control happens at the router level, so the rules you make are applied on all your connected devices—Laptops, tablets, smartphones, even game consoles. And along with that smart security comes great flexibility. With just a few clicks, you can set up customized profiles that define content filters and time periods for website access for each child, teenager, and parent in your household. That way everyone gets what they need with the protection you want. And since Parental Controls is web-browser based, you can manage your web access settings away from home (with Internet access), allowing you to quickly make exceptions if needed.

It's an online world and teenagers and children have unprecedented access to it. For a parent, that can be a scary thought. How can you limit the time they spend online—all that chatting, gaming, social networking, shopping, and YouTubing? How will you protect them from potentially harmful and inappropriate material—without looking over their shoulder 24/7? Parental Controls is the answer.

With Parental Controls, you can block inappropriate and dangerous sites, restrict access by time (for example, no Facebook during homework time) and category (adult, gaming, social media, etc.), and at the same time protect every device on your home network against adware and phishing through one central control point.

III. HOW TO USE PARENTAL CONTROLS IN WINDOWS 7

The Parental Controls feature is a valuable tool for controlling the amount of time your children spend on the computer and the programs they're using. Today we take a look at how to set up and use Parental Controls in Windows 7.

To access Parental Controls open the Start Menu and type *parental controls* into the Search box and hit Enter.

Alternatively you can open Control Panel and click on Parental Controls.

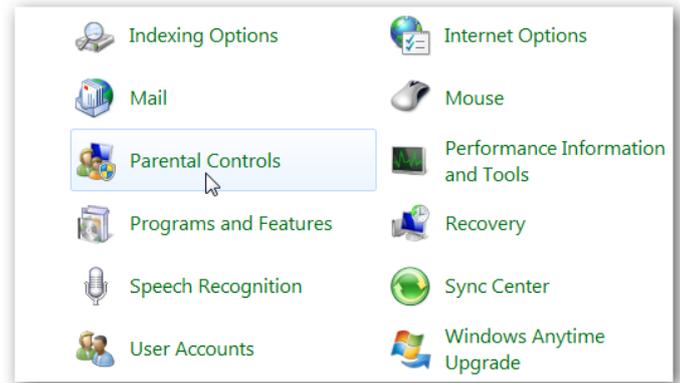


Figure 1

When you open Parental Controls, click on the child's account you want to set up. Make sure to password protect your Administrator account...otherwise anyone can turn off Parental Controls and use the computer with no restrictions.

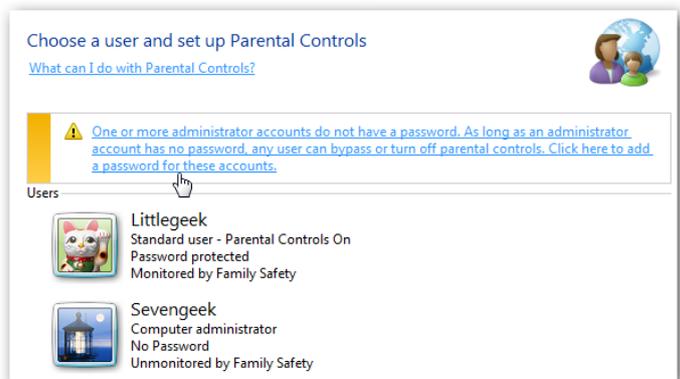


Figure 2

If you see a password hasn't been set when you go into Parental Controls, click on the message and you'll be prompted and Ensure Administrator Passwords.



Figure 3

Under Parental Controls mark the radio button next to *On, enforce current settings*. Then you can go through and control their computer time, games, and programs.

Set Time Limits

Click on Time limits to control when your child has access to the computer. If you want to only allow a few hours each day, it's easiest to left-click and drag the mouse across all of the time slots to block them. Then allow the time blocks when you want to make the computer available.

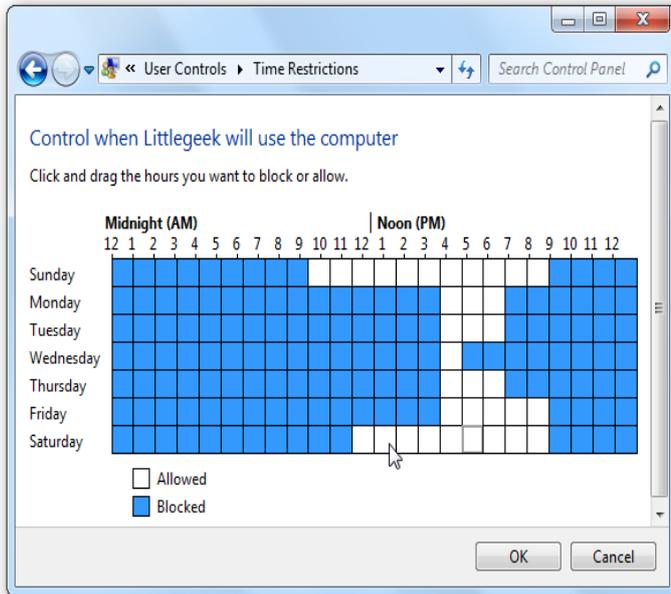


Figure 4

Control Games

Click on Games to control the type of access your child has to games on the computer. You can completely block all games or select games by ratings and game names. These game ratings are based on the Entertainment Software Rating Board.

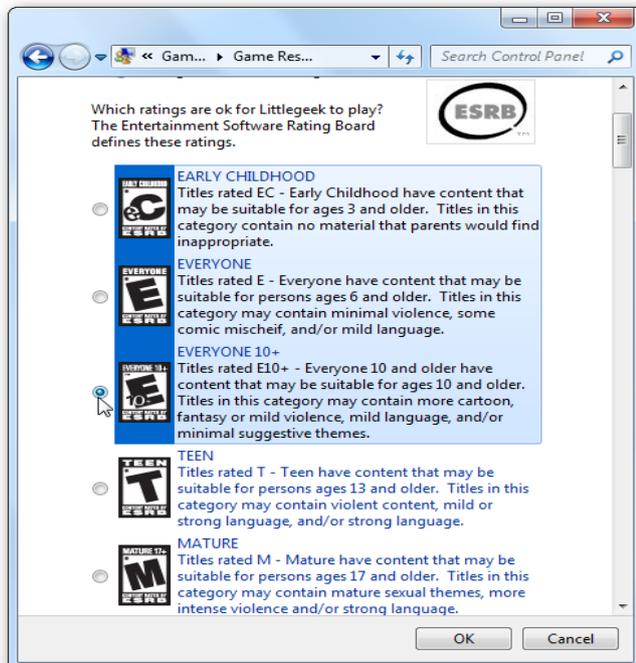


Figure 5

You can also select different game rating systems if it's more appropriate for your location or if you like a certain system better than another. You can also block games based on the type of content it contains...and it gives you a lot of choices.

Control Programs

If you want to restrict certain programs on the machine, click on *Allow and block specified programs* then scroll through the list of installed programs and block them.

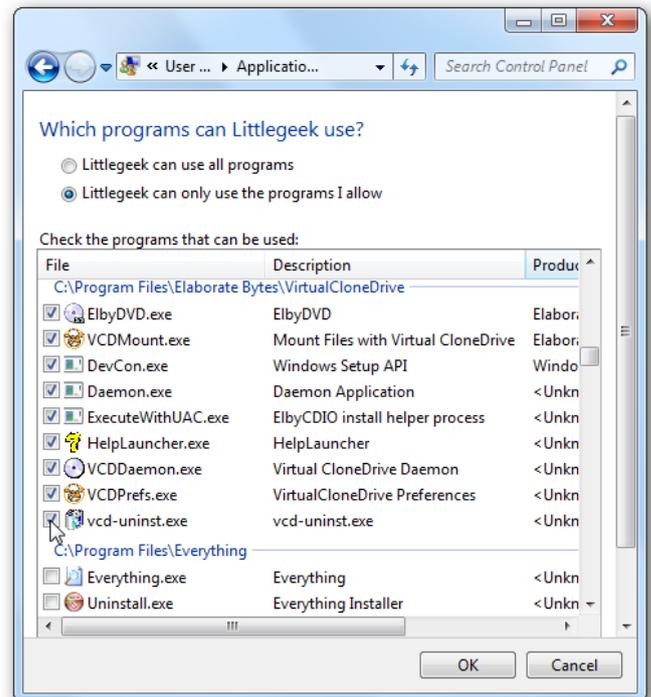


Figure 6

Additional Controls

Windows 7 doesn't have a Web Filter included like Vista did. If you want additional controls like Web Filtering and activity reports, you'll need to install Windows Live Family Safety which is part of the Windows Live Essentials suite. With it you can block access to certain sites and also get access to an activity report that shows you what sites your children have been visiting.

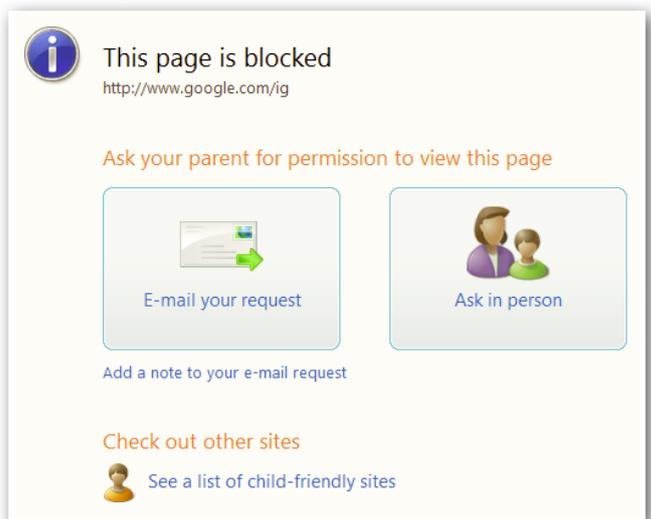


Figure 7

Everything can be controlled online which makes it nice if you want to access a report or change settings while at work.

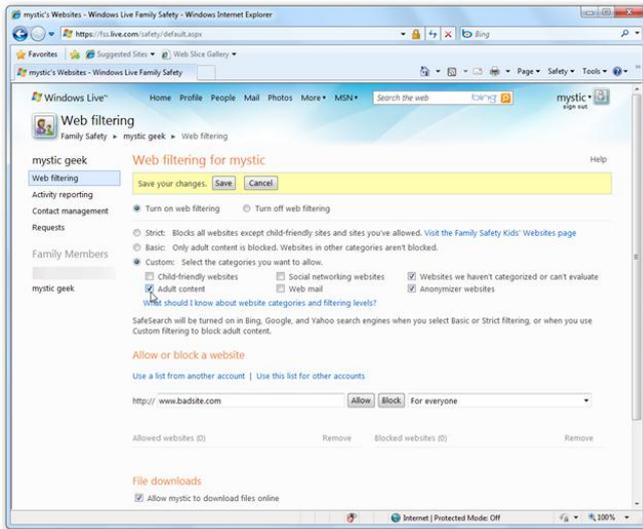


Figure 8

The Parental Controls feature is easy to use and helps you administer how your children use the computer. Of course nothing is perfect or fool proof and the Parental Controls won't replace good old fashioned "real parenting" but it makes it easier.

IV. ARCHITECTURE OF AGENT BASED FRAMEWORK

An agent is a human or artificial entity, who or which acts autonomously and pro-actively, and may exhibit social behavior and intelligence. A system is a whole of one or more agents. A system may consist of human agents (i.e., a human system), artificial agents (i.e., an artificial system), or a mix of human and artificial agents (i.e., a hybrid system). For example, a team of designers qualifies as a system, as does the combination of a human designer and his or her design support system. Intelligent agents are enhancing their performance measure by adopting a goal. The agent's performance measure contains many factors like to improve its sustain, improve its dynamics and avoid hangers. The diction problem is a complex one involving tradeoffs. The goal is a set of world states in which it is satisfied. The agent's task is to find out which sequence of actions will get it to a goal state. Before this, it needs to decide the various input problem an agent to be consider.

The interactions within mixed human-agent teams come in one of three modes: agent-agent interactions, human-human interactions, and agent-human interactions. Accordingly, the forms of shared mental models governing the joint activities of a mixed human-agent team also vary with the characteristics of the team members. The shared mental models for agent-agent teams may be blackboard-based, rule-based, or based on joint mental attitudes. Such representations still apply to agent-agent interactions in mixed human-agent teams. How shared mental models among human members in a team are established is far beyond our current understanding. However, this has nothing to do with the ability of humans to form high-performing teams. Therefore, one remaining but more important issue faced by mixed human-agent teams is how a human and an agent represent and reason about their mutual awareness. This, in turn, will depend on breakthroughs in a

variety of fields including Artificial Intelligence, speech recognition, and natural language understanding. As a short-term solution, it is not surprising to note that in the six projects described in interface agent technology is unanimously employed to represent the shared understanding between agents and their human users.

Using BDI Architecture, the desired configuration is stored as the Belief, the output may be stored in form of the desires and maintaining purpose is being resolved with agent intentions. In the intelligent interactive agent applications, user-system interaction is analogous to "collaborative problem solving". Initiative is defined as leading the process. The "initiator" decides which task to do next. For example, the initiator requests for information, presents information, or solves a sub-problem. The initiator changes when either leader can no longer drive the problem-solving process or new suggestions are made by the follower

V. CONCLUSION

In the mainframe computers age, the software systems were both built and used by computer science experts. In the current age of personal computers, these systems are still being built by computer science experts, but many of them (such as text processors, email programs, or Internet browsers) are now used by persons that have no formal computer education. Continuing this trend, we think that the next age will be that of the personal agents, where typical computer users will be able to both develop and use special types of software agents. We think that the Disciple approach, and the future developments outlined above, contributes directly to this new age in the software systems development process.

In the future, we could improve the system by incorporating state-of-art algorithms and concepts in other research areas such as interface design, algorithms and complexity, database, and human-computer interaction.

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