

# The Senior Citizen Autonomous Remote Control

Group ID: DEC 14-05

<http://dec1405.ece.iastate.edu/>

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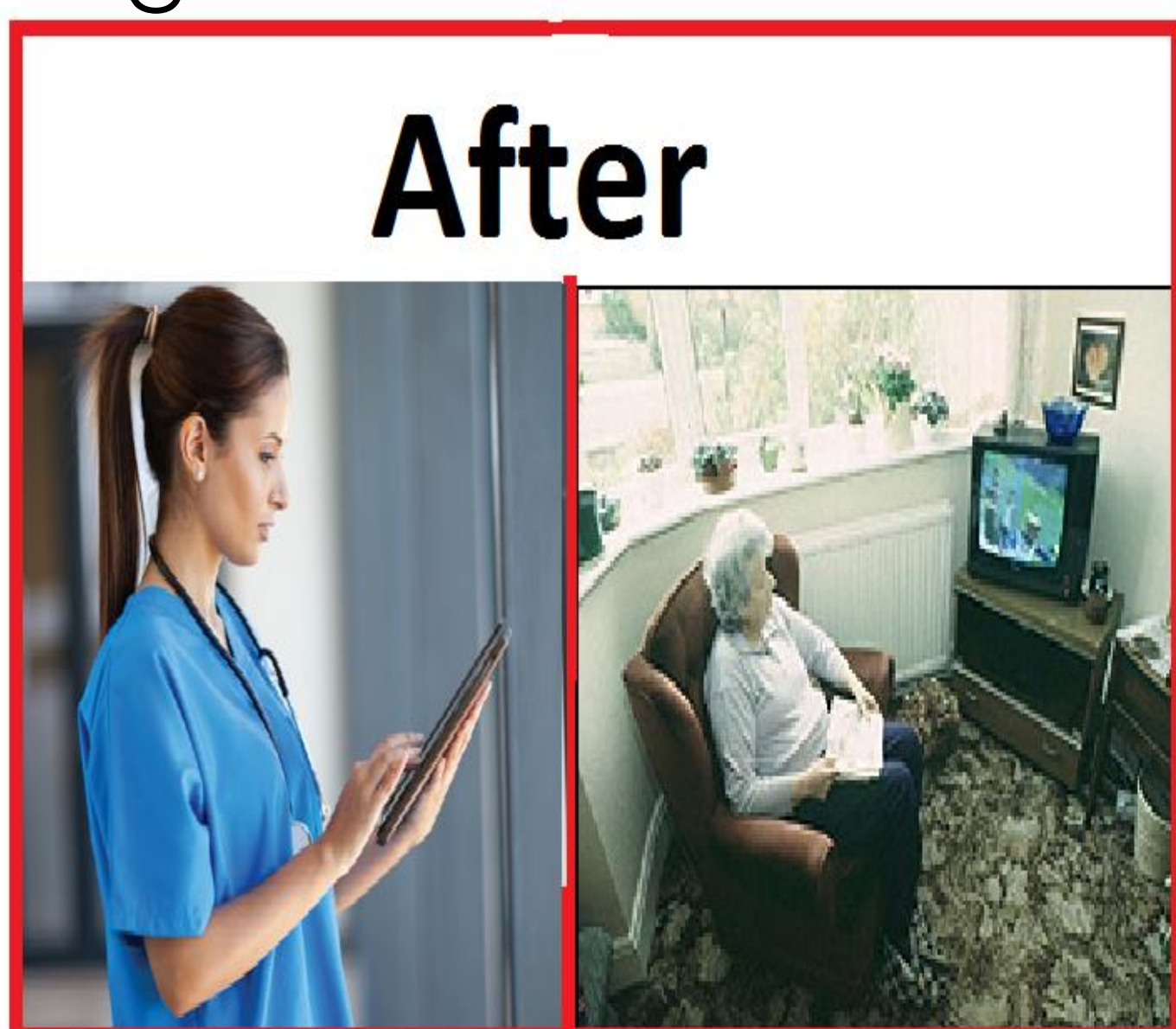
## Problem:

Elderly people have difficulty using television remotes and according to the Bureau of Labor Statistic Elderly individuals is spend 55% of leisure time of watching TV.

## Before



## After



## Solution:

A system that allows nurses/family to schedule TV shows on elderly behalf. The system changes the channel autonomously according what's scheduled

## Target Users:

Elderly individuals

## Target Operators:

Nurses, technical savvy individual

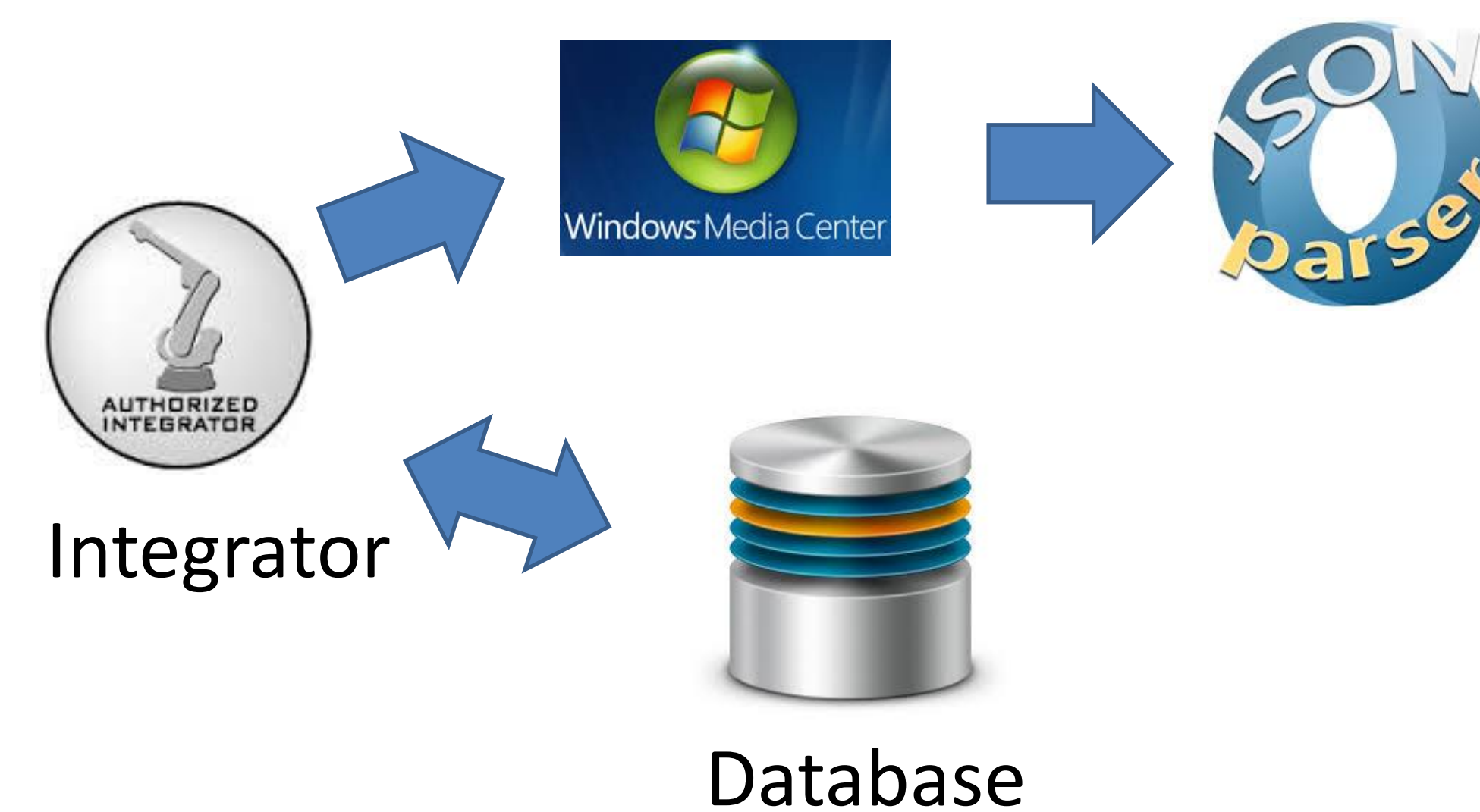
## Operating Environment:

Nursing home rooms and lobbies

## Cost:

Irdroid \$56  
Shipping \$6  
Nexus 7 tablet \$200  
Total = \$262

## Technical Details...Server



## Technical Details...Android App

## Programming Languages:

- HTML
- PHP
- JSON
- JavaScript

## Development Tools:

- ADT Eclipse
- Notepad++

## Testing Results:

- Completed by professional Software Engineer
- Had issues handling large amounts of data (application would freeze)
- Irdroid did not always connect to device
- IR signal not always received by TV

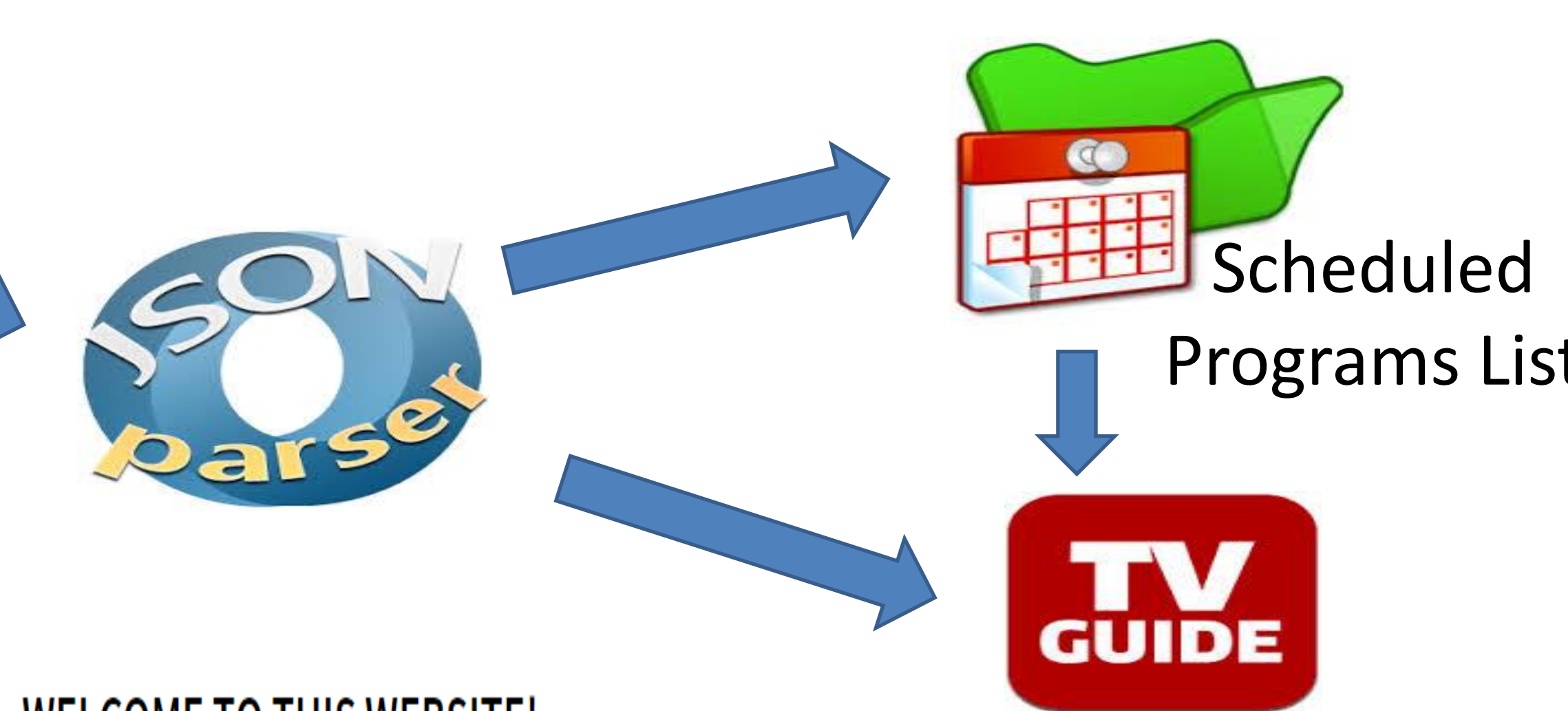
## Technical Details...Website



**No more remotes!!!**



Login Page



WELCOME TO THIS WEBSITE!

## Functional Requirements:

- Wireless Internet access
- Cable provider available through Microsoft Media Center
- Autonomously change channel
- Limit access to authorized users

## Non-Functional Requirements:

- Change channel fast.
- Large buttons for ease of use
- Auto-connect to HW with Bluetooth.
- Operational 24/7.
- Display correct TV guide information



TV Guide

Below you can find a list of programs that you can add to your scheduled list (you need to login in order to do this).

Program listing 1

Program listing 2

Program listing 3

	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00
Channel 1	Show1	Show2	Show3	Show4	Show5	Show6	Show7	Show8	Show9
Channel 2	Show1	Show2	Show3	Show4	Show5	Show6	Show7	Show8	Show9
Channel 3	Show1	Show2	Show3	Show4	Show5	Show6	Show7	Show8	Show9

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Scheduled Programs

Below is your scheduled programs list

Ch Num	Ch Name	# of Programs
2.0	SHOPHQ	170
3.0	KDMIDT	108
4.0	QVC	77
5.0	WOL	178
6.0	KDSM	248
8.0	KCCI	187
9.0	KCWI	254
10.0	KFPX	182
11.0	KDIN	214
12.0	GOAC012	42
13.0	WHO	182
18.0	EDAC018	42
22.0	MCC22	149
23.0	TBS	232
24.0	NIK	290

## Hands Free TV

Username

Password

New user?