

My Guardian: A Pervasive Guardian Service

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Introduction

What's Alzheimer and Dementia?

The diagram features a large central blue oval labeled 'DEMENTIA'. Surrounding it are five smaller blue ovals, each containing a type of dementia: 'Vascular Dementia' (top left), 'Parkinson' (top right), 'Alzheimer' (middle right), 'Creutzfeldt jacob' (bottom), and 'Lewy bodies' (middle left).

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Introduction

Why do we need « Geolocation »?

A woman aged 75 years disappeared.

Anyone who can help find this lady can communicate to 0223212222

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Topic Presentation

Issue:

« How does geotagging service offer a reliable and sophisticated solution for caregivers of sufferers of Alzheimer? »

Existing Solutions





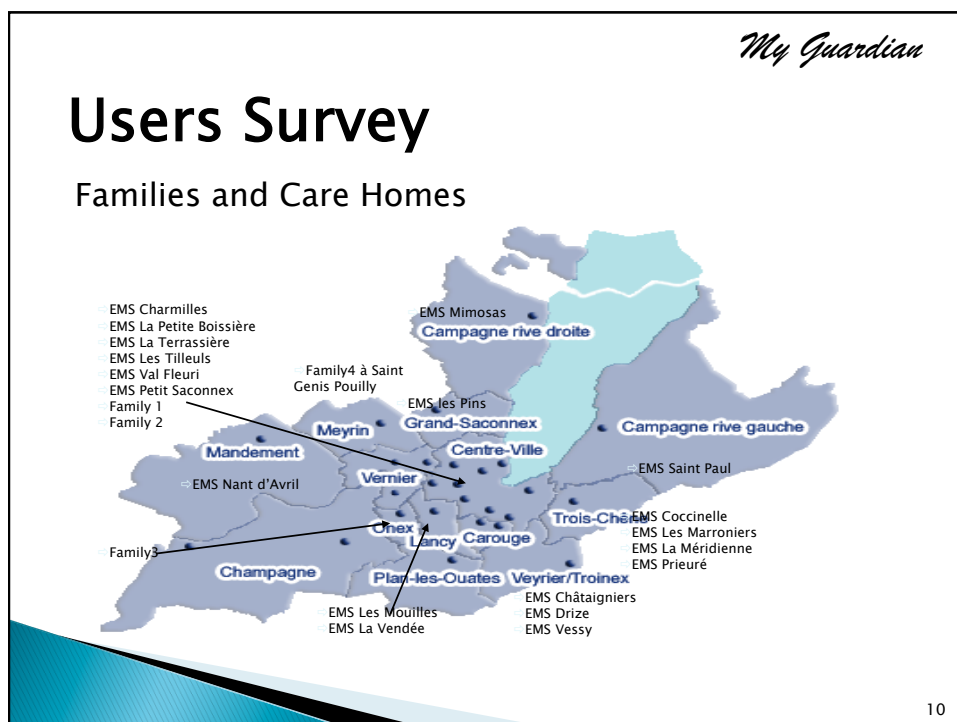
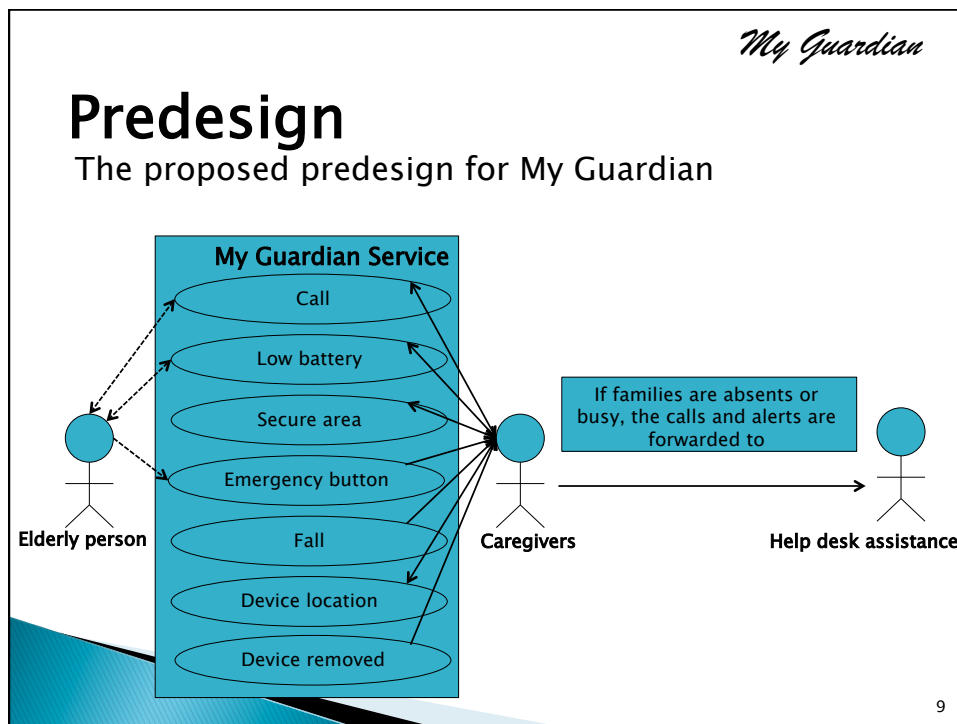
Existing Solutions

Comparison criteria

Geolocation technology	Dimensions
Type	Watertight
Followed the route in real time	Quality of the instruction manual
Setting the device	Information when the person leaves the secure area
Right of caregivers to manage the secure area	Quality of the micro
Launch a voice call from the device	Listening quality
Number of programmable numbers	Right of caregivers to manage phone numbers
Direct call of the caregiver	Opportunity for the distributor to manage the phone numbers
Sensitivity and access keys	Opportunity for the distributor to manage the secure areas
Information on the battery	The secure area up to how many kilometres
Autonomy of the device	Reliability at the network level
Availability of support	The device is used for geolocation inside or outside
Weight	How many people suffering from Alzheimer use this device
Price	SIM Card
Locking mechanism	

Existing Solutions

		
Battery	<ul style="list-style-type: none"> - Simplicity and quick charge - Sensor which puts the device to sleep after one minute of no movement 	<ul style="list-style-type: none"> - Poor autonomy - Difficulty to see the level of charge
Help desk assistance	<ul style="list-style-type: none"> - High availability 	<ul style="list-style-type: none"> - No answer to every alert call
Secure area	<ul style="list-style-type: none"> - Unlimited numbers of secure areas 	<ul style="list-style-type: none"> - No secure area
Monitor of location	<ul style="list-style-type: none"> - Real time monitoring 	<ul style="list-style-type: none"> - No real time monitoring
Design	<ul style="list-style-type: none"> - Good design - Small / not heavy - It cannot be cut 	<ul style="list-style-type: none"> - Complexity of the manual



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Users Survey

22 Care Homes

- ✓ Alzheimer age [80...89 years], 59% Women
- ✓ 90.9% need the presence of caregivers the whole day
- ✓ 81.8 % against the existence of help desk assistance
- ✓ 45.45% alert by SMS / 13.63% alert by email / 40.9% alert by SMS and email
- ✓ 77% prefer a bracelet
- ✓ 90% are for sending an SMS for localization
- ✓ For 9% of these caregivers, this device represents a threat
- ✓ For 68.18% of caregivers, it represents a useful aid
- ✓ For 13.63% of caregivers it is a lack of freedom

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Users Survey

4 Families

- ✓ Alzheimer average age: 81 years
- ✓ Any device of geolocation
- ✓ 2 out of 4 respondents would prefer their elderly people's illness remains in family without involving a help desk assistance
- ✓ Sending an SMS and receiving an automatic reply with the location details
- ✓ Useful aid
- ✓ 3 families: alert by SMS
- ✓ 1 family: alert by SMS and email

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Users Survey

Users comments

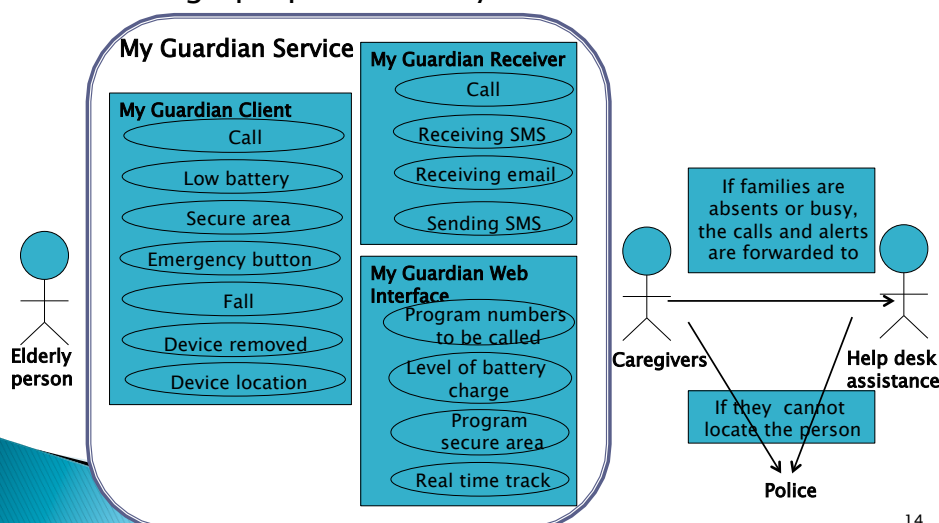
- ✓ « Un dispositif discret en terme de taille »
- ✓ « C'est une contention au même titre que les barrières de lits »
- ✓ « Surveillance policière »
- ✓ « Eviter les longues procédures de recherches, Wi-Fi peut être un inconvénient pour la santé »
- ✓ « Phase du sommeil »

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System Design

The design proposed for My Guardian



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Synthesis

- ✓ Easily reconfigurable / Automatic answer
- ✓ Sensor to monitor the phase of sleep / Unobtrusive
- ✓ A powerful battery
- ✓ SMS for location
- ✓ Alert if the battery is low, if the senior falls, if he leaves the predefined area
- ✓ Automatic recording of data
- ✓ 3 techniques of geolocation (GPS, GSM, Wi-Fi)
- ✓ Emergency button
- ✓ Powerful memory
- ✓ Buttons for calling the programmed numbers
- ✓ LED
- ✓ No locking mechanism
- ✓ Altimeter
- ✓ Web interface / Help desk assistance



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Conclusion

- ✓ Existing solutions, Geolocation, Dementia and Alzheimer
- ✓ Users survey / Real interest
- ✓ Design of a geolocation based solution / Reliable device

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Questions?