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INTRODUCTION:

Since security and privacy has become something crucial nowadays, we decided to build a simple surveillance system designed mainly for houses but the general design can be used to larger properties such as companies parking lots or any sort of property that can be assigned one or more individuals

STATE OF ART:

While video surveillance technology existed in the 1940s, it didn't become mainstream until the 1970s. The images were grainy at first, but users could see images of visitors on a television monitor. An early advancement was made in 1966, when nurse Marie Van Brittan Brown invented the first home video security system. It was the first time a remote control could be used to open a door.

In the 1980s, security became a large part of home automation technology, as automated garage doors, infrared controls, and fiber optics became mainstream. These systems became more affordable in the 1990s. Today, automated home security systems are commonplace and controlled via familiar devices, including smartphones

Leading companies in this field

Homiri :



**Homiris est un service opéré par EPS,
le N°1 de la télésurveillance en France ⁽³⁾**

Plus de 500 000 abonnés nous font confiance

Pour protéger votre foyer, un système d'alarme connecté
mis à disposition et installé par nos soins.

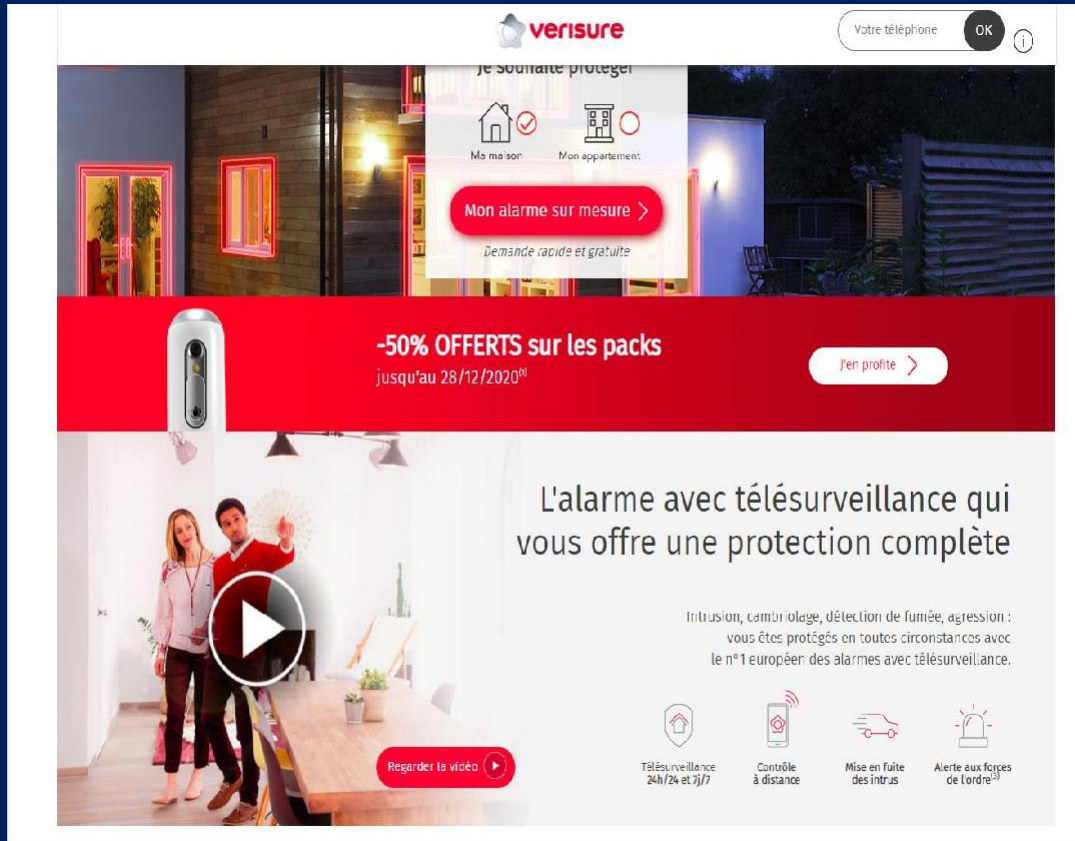
Avec Homiris, vous bénéficiez d'un équipement de haute technologie pensé et conçu pour assurer efficacement votre sécurité et celle de vos biens. Mais parce qu'être protégé ne veut pas dire bousculer son quotidien, nous vous proposons un matériel de télésurveillance efficace et discret. Sa mise à disposition, son installation et sa maintenance, y compris le changement des piles, sont incluses dans votre abonnement.



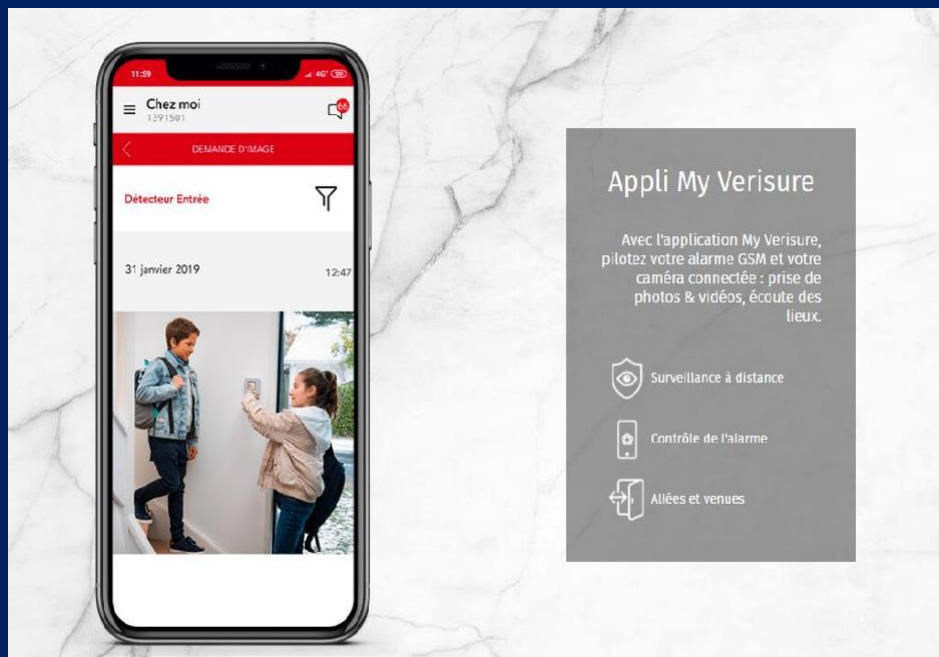
SANS FRAIS
d'installation et
de mise en service



Verisure :

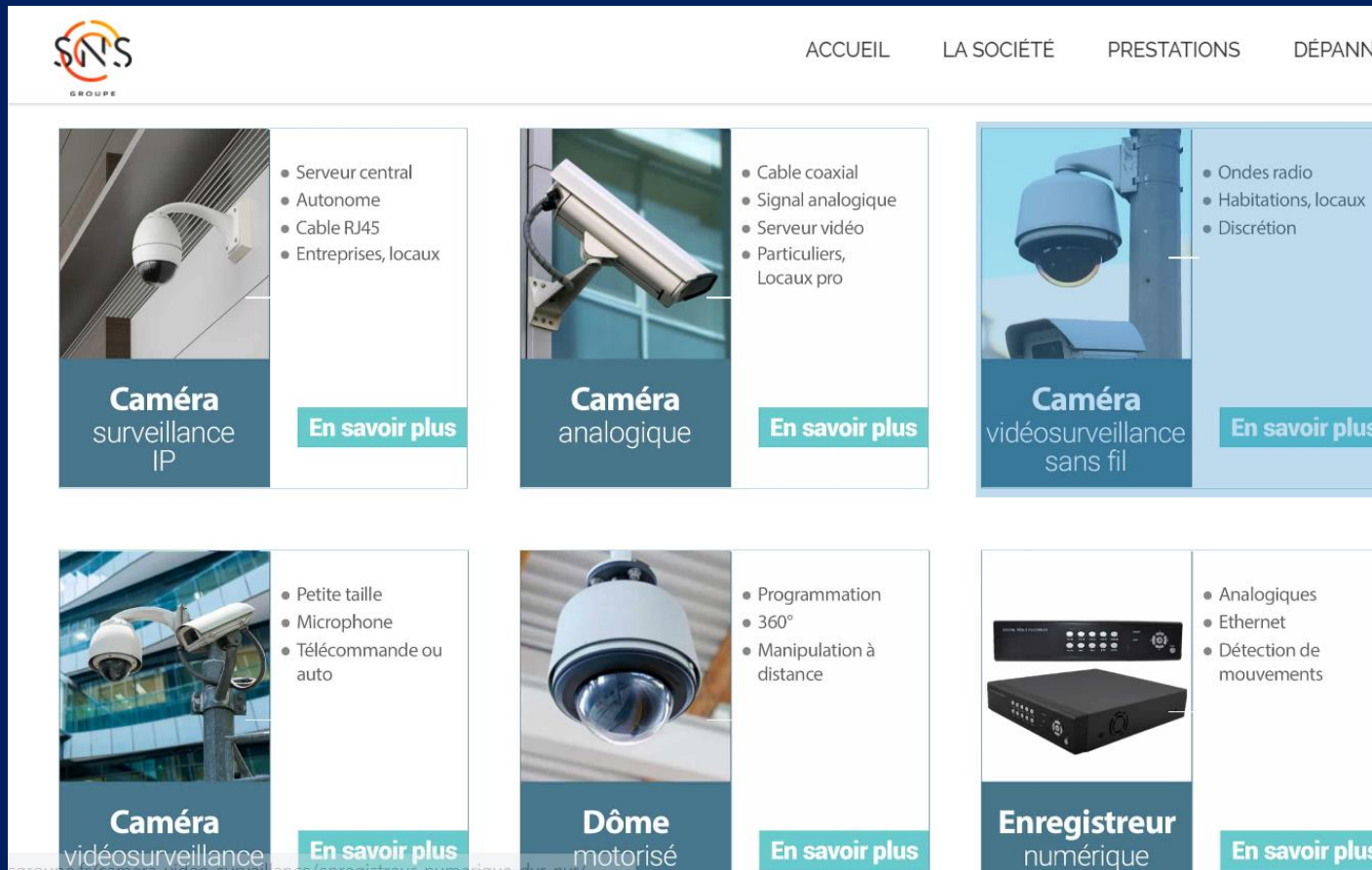


The banner features the Verisure logo at the top center. Below it, a navigation bar includes 'Votre téléphone' and 'OK'. The main content area is split into two columns. The left column shows a house at night with a red alarm device icon. The right column shows a person in a red shirt pointing at a wall. A central overlay contains the text 'Je souhaite protéger' with icons for 'Ma maison' and 'Mon appartement', and a red button 'Mon alarme sur mesure >' with the subtext 'Demande rapide et gratuite'. Below this, a red banner advertises '-50% OFFERTS sur les packs jusqu'au 28/12/2020' with a 'J'en profite >' button. The bottom section features a large play button over a photo of a couple in a living room, with the headline 'L'alarme avec télésurveillance qui vous offre une protection complète'. Below the headline, it states 'Intrusion, cambriolage, détection de fumée, agression : vous êtes protégés en toutes circonstances avec le n°1 européen des alarmes avec télésurveillance.' and lists four services: 'Télésurveillance 24h/24 et 7j/7', 'Contrôle à distance', 'Mise en fuite des intrus', and 'Alerte aux forces de l'ordre'.



The image shows a smartphone displaying the Verisure mobile app. The app interface includes a status bar at the top with the time '11:59', signal strength, and battery level. Below the status bar, the app header shows 'Chez moi' with a location pin icon and a notification icon. The main content area is titled 'DEMANDE D'IMAGE' and displays a notification for 'Détecteur Entrée' with a filter icon. The notification details include the date '31 janvier 2019' and the time '12:47'. Below the notification is a photo of a man and a woman in a hallway. To the right of the smartphone, a grey box titled 'Appli My Verisure' contains the text 'Avec l'application My Verisure, pilotez votre alarme GSM et votre caméra connectée : prise de photos & vidéos, écoute des lieux.' and lists three features: 'Surveillance à distance', 'Contrôle de l'alarme', and 'Allées et venues'.

SNS GROUPE



The screenshot displays the SNS GROUPE website with a navigation menu (ACCUEIL, LA SOCIÉTÉ, PRESTATIONS, DÉPANNAGE) and a grid of six security product cards. Each card includes an image of the product, a list of features, and a 'En savoir plus' button.

Product	Features
Caméra surveillance IP	<ul style="list-style-type: none">• Serveur central• Autonome• Cable RJ45• Entreprises, locaux
Caméra analogique	<ul style="list-style-type: none">• Cable coaxial• Signal analogique• Serveur vidéo• Particuliers, Locaux pro
Caméra vidéosurveillance sans fil	<ul style="list-style-type: none">• Ondes radio• Habitations, locaux• Discrétion
Caméra vidéosurveillance	<ul style="list-style-type: none">• Petite taille• Microphone• Télécommande ou auto
Dôme motorisé	<ul style="list-style-type: none">• Programmation• 360°• Manipulation à distance
Enregistreur numérique	<ul style="list-style-type: none">• Analogiques• Ethernet• Détection de mouvements

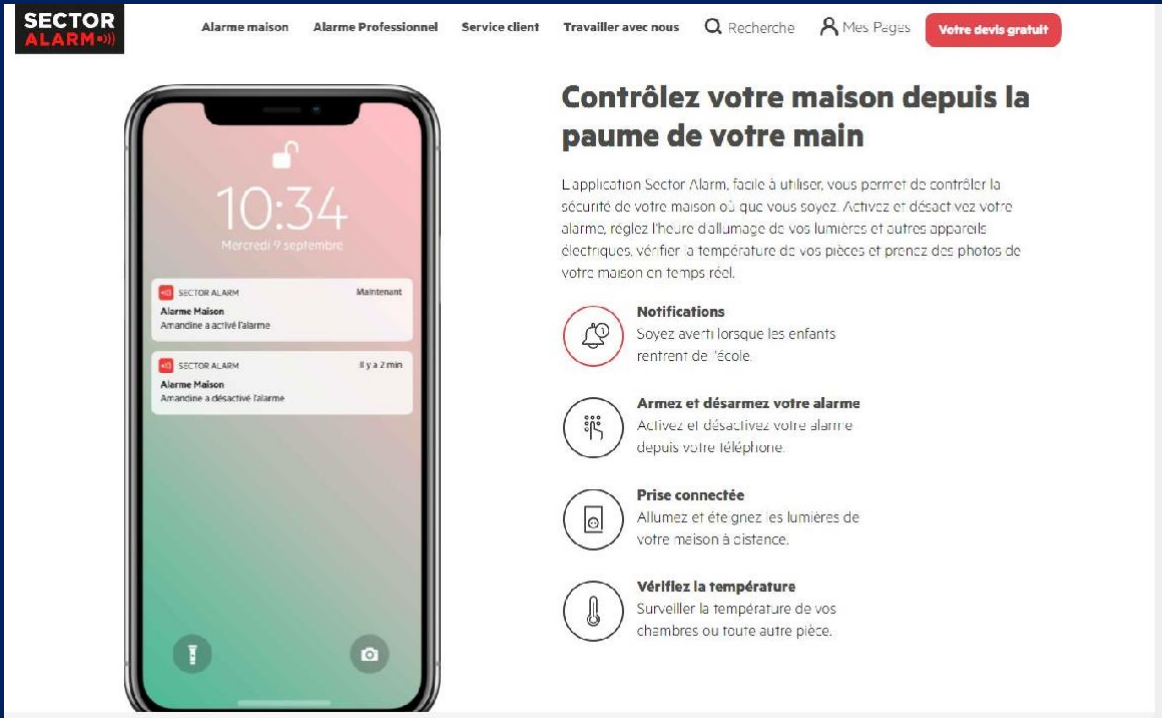
SNS SOLUTION NUMERIQUE SECURITE, a simplified joint stock company, has been in business for 8 years.

Located in FONTENAY-SOUS-BOIS (94120), it specializes in the sector of activities related to security systems. Its workforce is between 6 and 9 employees.

Societe.com lists 2 establishments and the last notable event of this company dates from 17-10-2019

Sector alarm:

With 25 years of experience and 550 000+ client across Europe, the difference between this company and the previous ones is that this company provides customized surveillance Such as temperature monitoring , smoke detection , motion detection .. etc.



The image shows a screenshot of the Sector Alarm mobile application interface. At the top, there is a navigation bar with the following items: "ALARME" (with a red alarm icon), "Alarme maison", "Alarme Professionnel", "Service client", "Travailler avec nous", "Recherche", "Mes Pages", and a red button labeled "Votre devis gratuit".

The main content area features a large image of a smartphone displaying the app's home screen. The screen shows the time "10:34" and the date "Mercredi 9 septembre". Below this, there are two notification cards from "SECTOR ALARM" regarding "Alarme Maison" status changes: "Armandine a activé l'alarme" (Maintenant) and "Armandine a désactivé l'alarme" (il y a 2 min). At the bottom of the phone screen, there are two circular icons: a TV and a camera.

To the right of the smartphone image, there is a section titled "Contrôlez votre maison depuis la paume de votre main". Below the title, there is a paragraph: "L'application Sector Alarm, facile à utiliser, vous permet de contrôler la sécurité de votre maison où que vous soyez. Activez et désactivez votre alarme, réglez l'heure d'allumage de vos lumières et autres appareils électriques, vérifiez la température de vos pièces et prenez des photos de votre maison en temps réel."

Below the paragraph, there are four feature icons with corresponding text:

- Notifications**: Soyez averti lorsque les enfants rentrent de l'école.
- Armez et désarmez votre alarme**: Activez et désactivez votre alarme depuis votre téléphone.
- Prise connectée**: Allumez et éteignez les lumières de votre maison à distance.
- Vérifiez la température**: Surveillez la température de vos chambres ou toute autre pièce.

SOMFY

SOMFY IS A FRENCH INDUSTRIAL GROUP FOUNDED IN 1969. HISTORICALLY LOCATED IN CLUSES IN HAUTE-SAVOIE, IT IS TODAY ONE OF THE WORLD LEADERS IN MOTORIZATION, THE AUTOMATION OF HOME AND BUILDING OPENINGS AND ALARM SYSTEMS

The screenshot shows a website interface for alarm systems. At the top left, the word "Alarmes" is displayed. On the right, there are navigation links: "Kits alarmes", "Détecteurs et sirènes", and "Télécommandes". The main content area features three product cards:

- SOMFY HOME ALARM**: "Solution complète de sécurité alertant AVANT intrusion". Price: "A partir de 399.00 €".
- SOMFY ONE+**: "Système d'alarme avec caméra intégrée". Price: "A partir de 399.00 €".
- PACK ALARME PROTEXIOM ULTIMATE GSM**: "Le système haute sécurité pour protéger vos proches ou vos biens en toute simplicité". Price: "699.00 €" (with a crossed-out "859.00 €" above it).

On the right side of the product cards, there is a vertical stack of three icons: a person with a speech bubble, a pair of scissors, and a person icon.

OUR SYSTEM DESIGN :

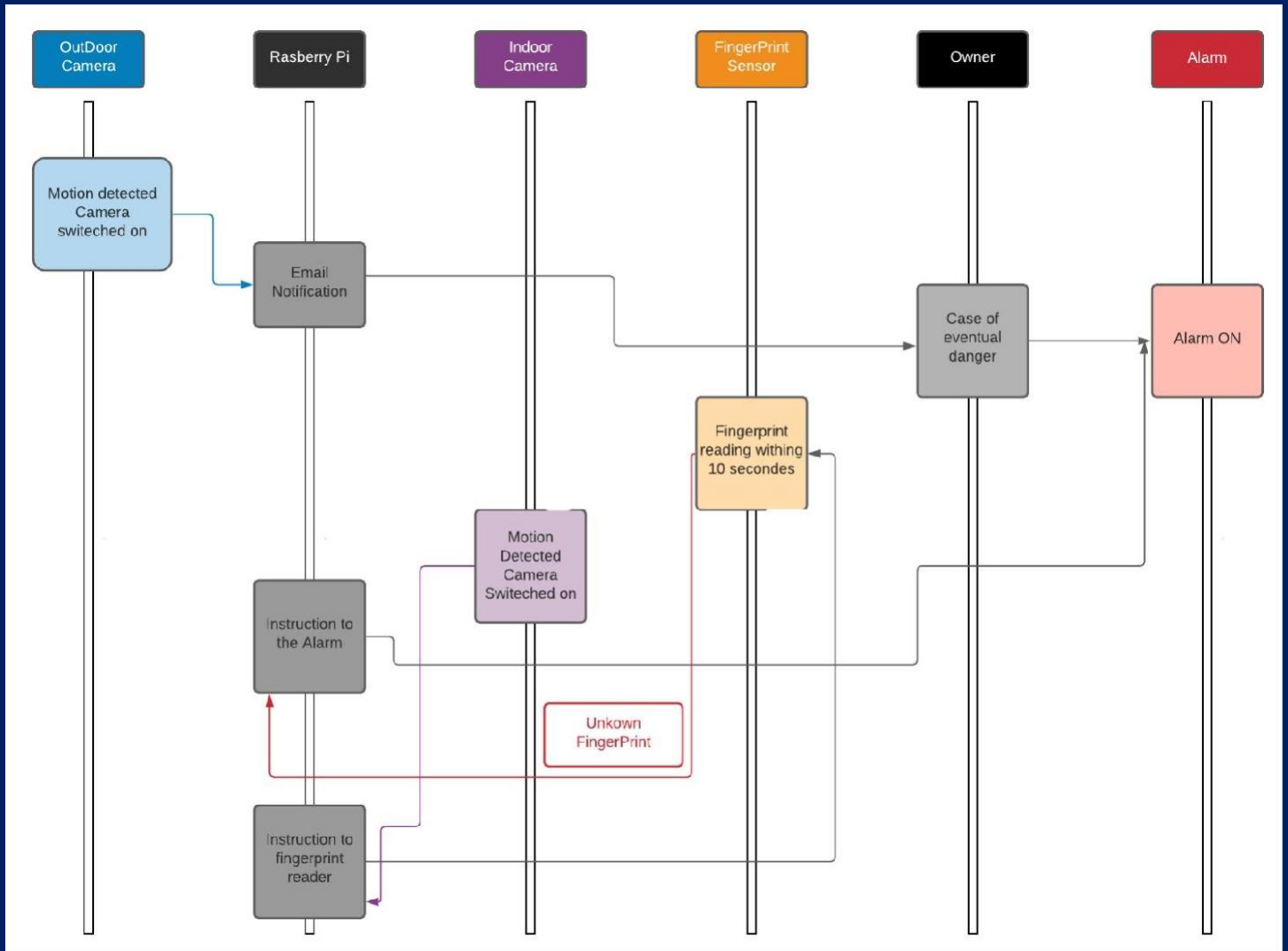
General functioning :

If the outdoor camera detects a movement, it will be automatically activated and the owner will be notified

Via an e-mail notification.

If the object manages to access the property the indoor camera will take a picture of the detected object and email it to the owner, he then will have the choice to trigger an alarm or not. If the fingerprint authentication fails the alarm will be triggered automatically within 10 seconds.

Sequence diagram:



Components:



Raspberry pi 3 B+ model



DollaTek Blue Light Optical Fingerprint Reader



USB to TTL convertor



Two Caméras : 2.4G WiFi

sans Fil IP Caméra,PIR Détection de Mouvement,Audio bidirectionnel et vision

The difference between our system and the other systems available on the market :

Most of the surveillance systems available on the market do not provide the customer with full access to the system so he can trigger the alarm by himself instead, if the system detects a potential threat the property owner will automatically notified but the property has to be checked by a customer service agent.

This process is most of the time annoying and can represent a privacy issue for some people, since most of these systems can be used by malicious users to access to collect the owner's data and monitor his activity.

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