Politecnico di Milano

Corso di Laurea Magistrale in Computer Science and Engineering
Dipartimento di Elettronica e Informazione

Design Document

The Big Family

Hypermedia Applications 2018 Project

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Chapter 1

Abstract

In this document will be presented, using various charts, the design on many levels of the website of an association for children with disabilities called “The Big Family”. The purpose of the website is to introduce the association, its values and its services to the new users and to gather useful informations and contacts for people who already know it.

At first the website’s content structure wil be presented using the Interactive Dialogue Model on three levels of abstraction. Than some fictional scenarios will be used to show some of the website features. Next the design-in-the-small of the site’s pages is going to be explained through a low-fidelty wireframe fro each one of them, showing the basic visual organization of contents, navigation and interaction elements on the “screen”. In the end the database structure will be explained by the means of the Entity Relationship Model on two levels of abstraction.

The used software is:

- https://www.draw.io/ for the IDM and database schemas
- https://wireframe.cc/ for the wireframes

Chapter 2

Graphical representations

2.A C-IDM

In this schema are indentified Single topics (Who we are, News, Contact us, Help us, F.A.Q.), Multiple topics (Event, Location, Service, People), their groups, relevant relations and cardinalities.

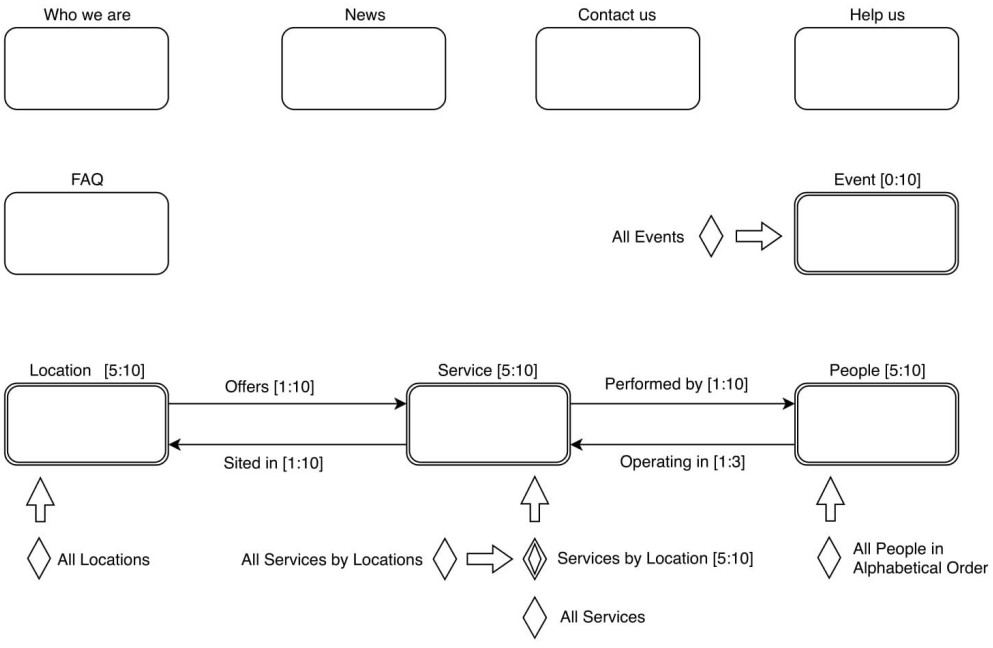

Figure 2.1: C-IDM

2.B L-IDM

On the logical level dialogue acts are added for every topic, while groups and multiple groups translates into introductory dialogue acts. On the news topic we decided separate internal news of the association from other external news that could interest the world of disability associations and to add here a category of news which are more related to logistical informations called important announcements. In the contact us topic we included every information related to generic association contacts, including locations contacts and position, while the contacts related to people working in the association are left in their topic. Also we added here the helper form to contact the association directly from the site. In the help us topic, after general explenation on how to help, we distinguished two kind of donations, money and goods. In the event topic we choose to put a photogallery of past editions because it's the best way to understand how the event is going to be, togather with an optional dialogue act on partecipation requirements that could be used in closed number events. Who we are, Location, Service and Person are intended to present what the association can offer to the interested public.

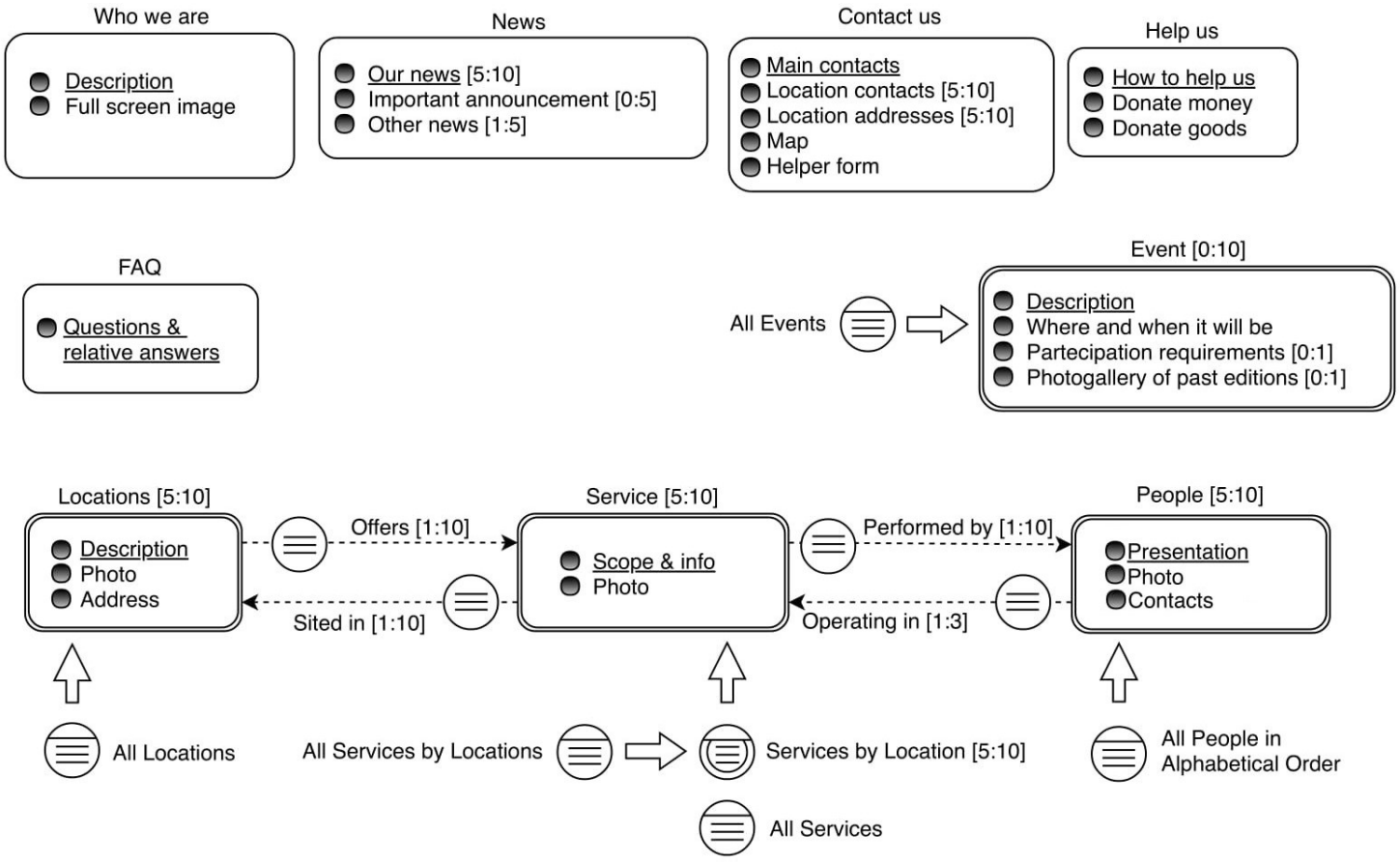

Figure 2.2: L-IDM

2.C P-IDM

In the end we distributed the dialogue acts, relevant relations and groups into pages and we defined the links between them. All the topics include only one page, in fact we did't need to make separate pages for different dialogue acts because most of them are small and with the latest technologies in web design it is possible to fit in a dynamic way many pieces of information in one page. From now one I will use topic and page as synonyms, but it only applys for the reason above, being them two different concepts. Talking about pages we decided to merge Person, Service and Location topic pages with their respective transition pages and links, and to use dynamic introductory pages for the all services group and the multiple group of services by location connected by structural links. Moreover all groups will have group links to cycle through the pages, as highlighted by the grand tour pattern. To conclude this section, landmarks will be the same in every page.

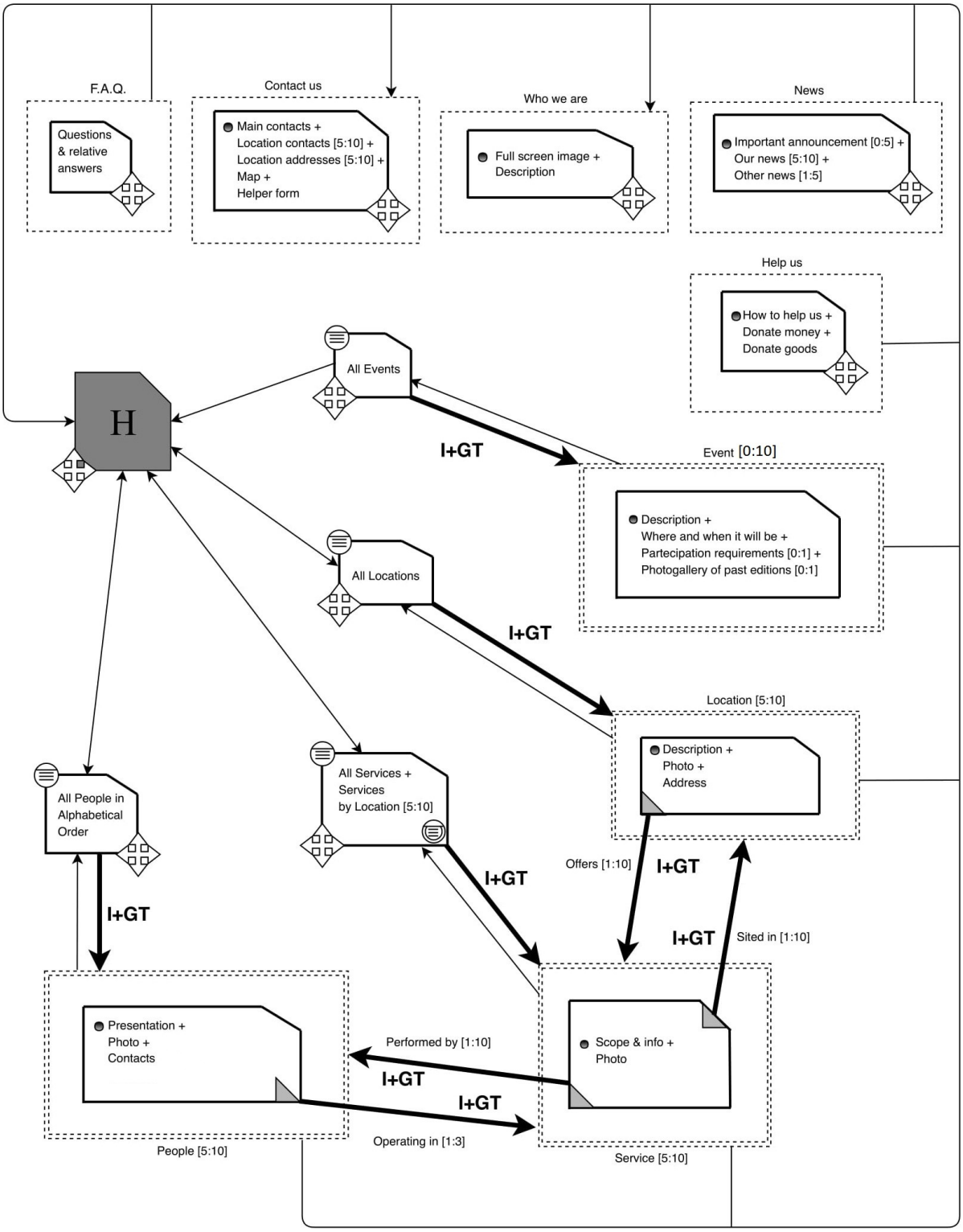

Figure 2.3: P-IDM

Chapter 3

Scenarios

1. Sergio is a social educator who works with people with disabilities and, at a training conference, he stumbles upon a flyer reading "The Big Family – Growing Up Together" accompanied by a URL. Curious about it, he takes the flyer and he digits the URL on the navigation bar of his smartphone's browser. The home page of The Big Family's website loads and he sees a slideshow reading "Our services", "Our Team", "Our Location" and under it a paragraph titled "About Us". That's what he was looking for, so he reads it and he acknowledges a brief description of the association's scope. He touches the paragraph title because he wants to know more, and he is redirected to a page titled "Who We Are" where he reads more about the association. Happy of his discovery, he puts the flyer in his pocket looking forward to giving a better look at the association's offer once at home.

2. Giovanni Giorgio, who recently moved in Certaldo, is the parent of a disabled child and he's looking for a structure in which his son Francesco can be welcomed and assisted. After a quick search on the internet he discovers that the nearest center to his house is run by "The Big Family" association for disabled children. Looking it up on Google he finds their website and, after reading the "Who We Are" page, he clicks on the "Locations" landmark, chooses the Certaldo's location and opens the first service. After reading the description he goes back to the location page, using the links of the locations in which the current service is offered, and checks out the other services until he finds the one fitting his son's needs. He also quickly checks the operators working in that specific service before clicking on the "Contact Us" landmark on the bottom of the page to obtain the secretary's number. Now he will call them to enroll his son.

3. Angela's nephew Filippo often attends some services in the Fidenza's location of "The Big Family" association and today she's asked to pick him up. Angela doesn't know the address of the location, so she looks up on Google the association website and, once in, she clicks on "Locations" landmark, then on Fidenza's location and finally she obtains the address. Now she takes the car and sets the address on the navigator before leaving.

Chapter 4

Design-in-the-small

The fixed elements in every page are the banner at the top of every page (containing the Help us landmark), the landmarks, that we decided to divide into two groups: one of landmarks regarding exposing content and the other of the landmarks answering more practical questions; and in the end the breadcrumb for orientation info, which is in every page except the homepage. In the homepage we decided to put a big image slideshow presenting the three groups of locations, people and services, because they are the main component of the association and to capture the user attention. Under that we selected three topics corredated with a description which in our opinion are the more useful for a user. The main concept of our site is that pages must be scrolled to see the concept, as in most modern websites and applications. The services group page will have a slider to choose between all services and the services grouped by every location, in this way the user will not lose the cognitive space he is in. The other important orientation info is inside every group: there will be a bar telling the user what group is he inside, accompanied by next and previous group link's button to cycle through the other elements of the group. Lastly pages of a topic related to another ones contain a list of transition links to the elements of the other topic and, on clicking one of them, the new page will show a description of the group of pages defined by that relation in the orientation info between the next and previous buttons (e.g. From a location page I click one service hosted there, the orientation info of the service will say: "Services hosted in that location" to say that you can cycle through them).

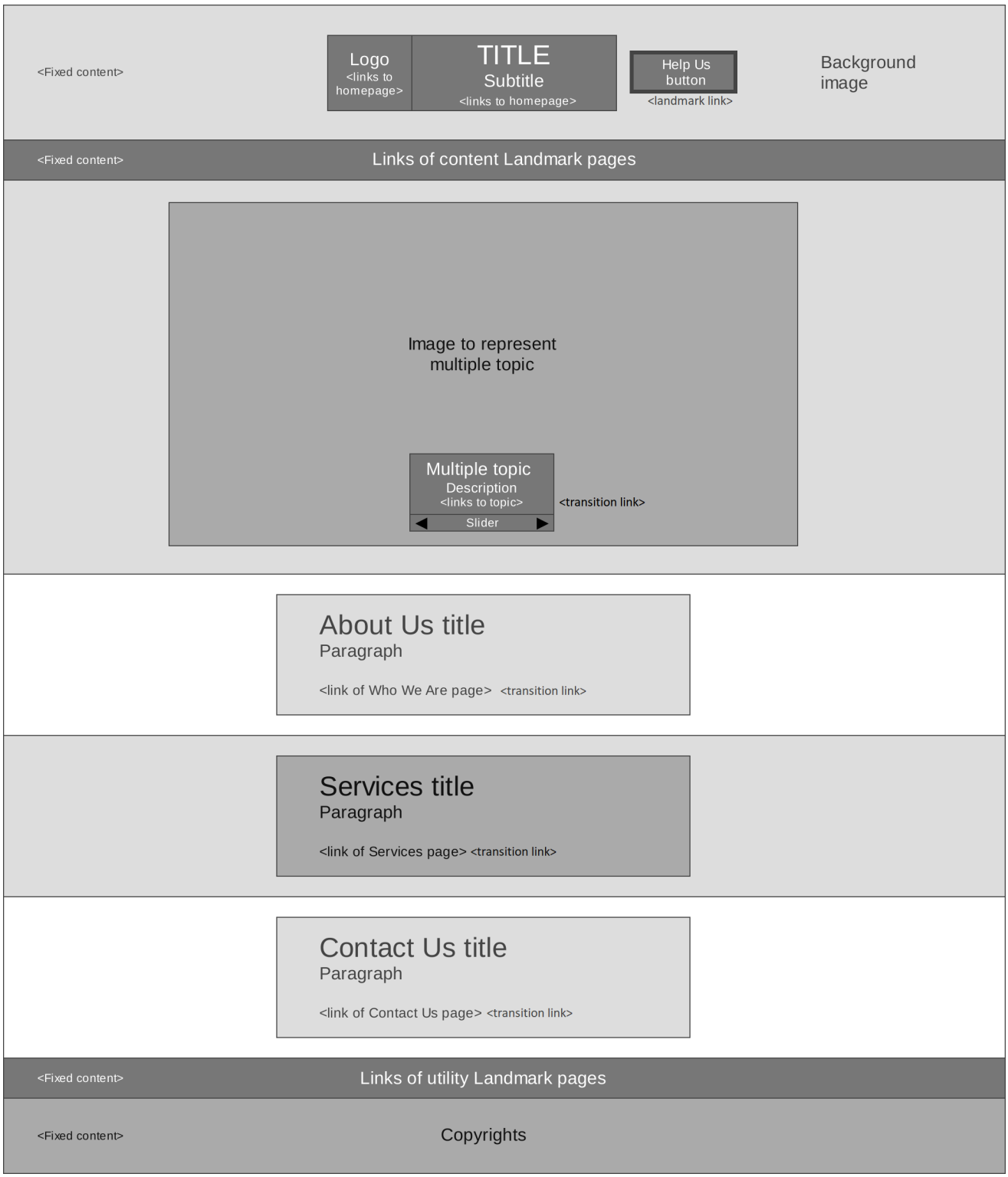

Figure 4.1: Homepage

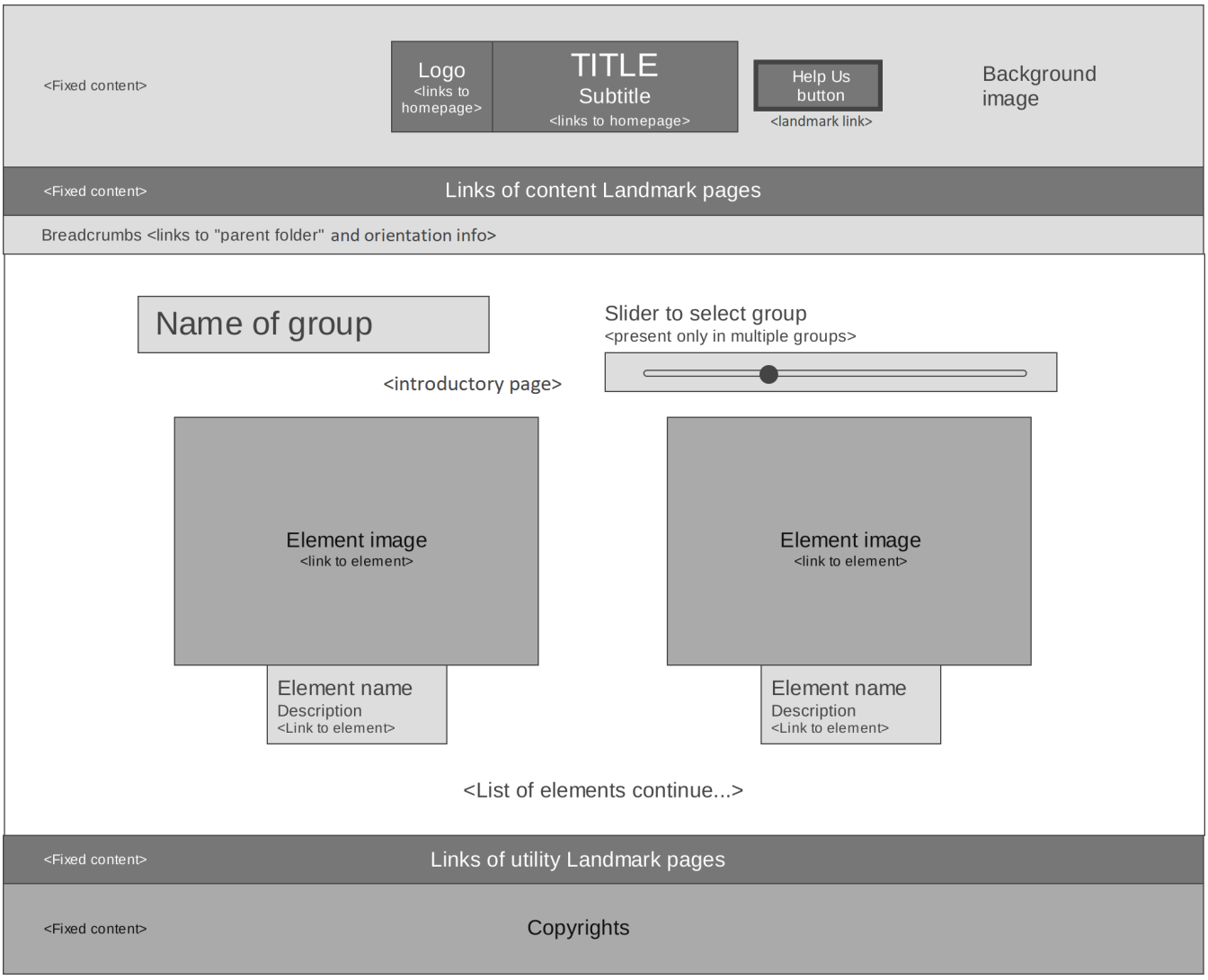

Figure 4.2: People, Services and Locations Group page

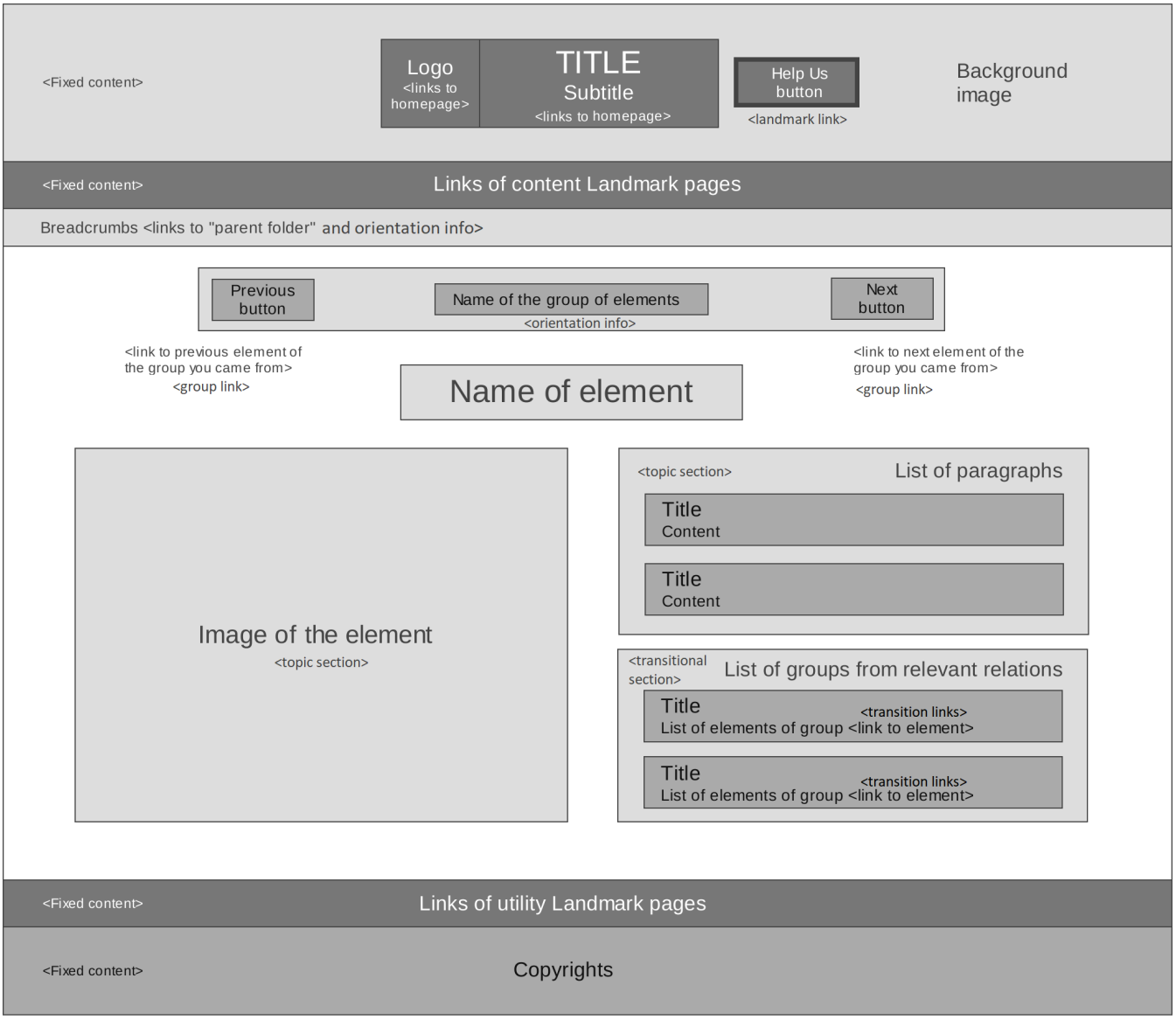

Figure 4.3: Person, Service and Location Multiple Topic Page

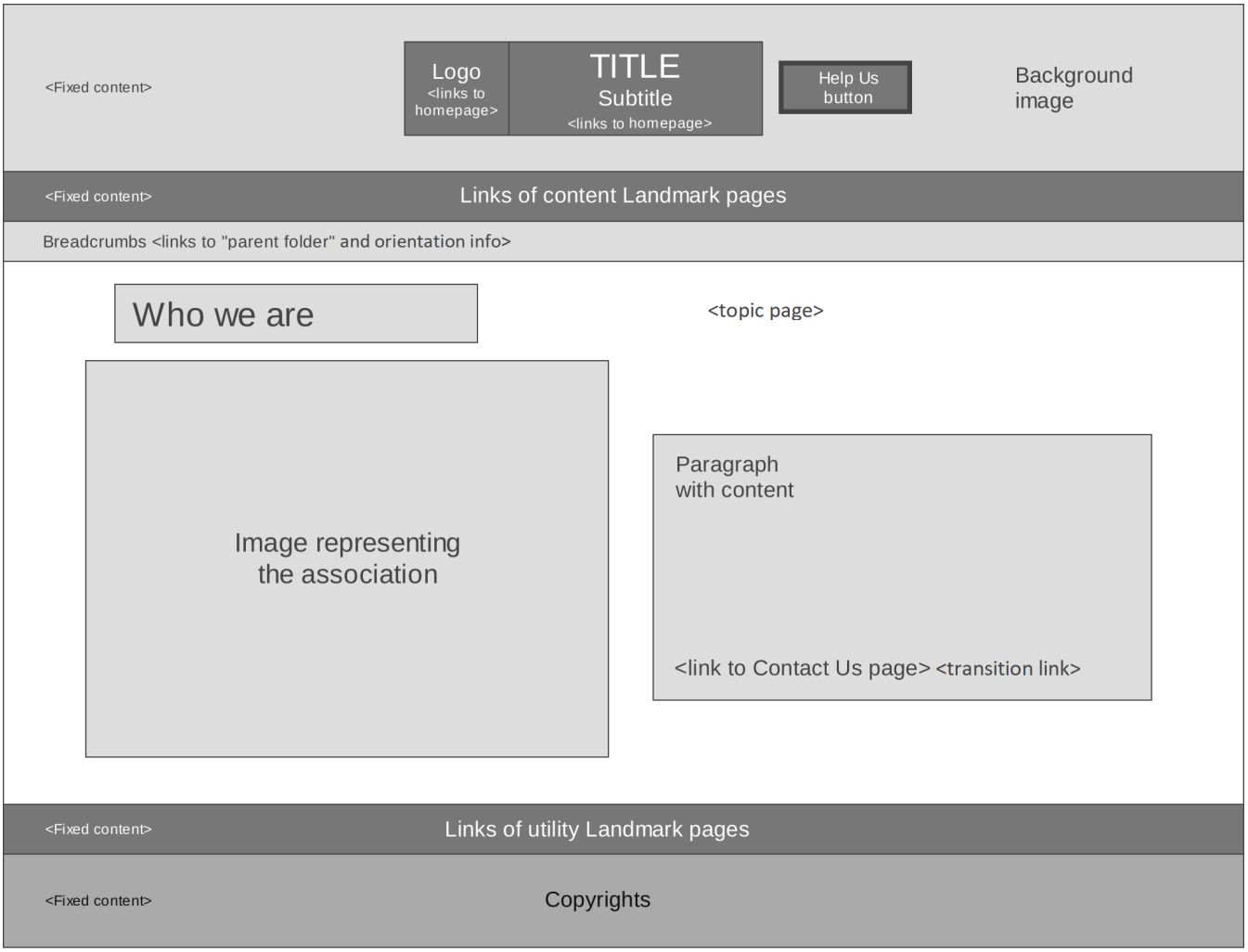

Figure 4.4: Single topic page: Who we are

Figure 4.5: Single topic page: Contact us

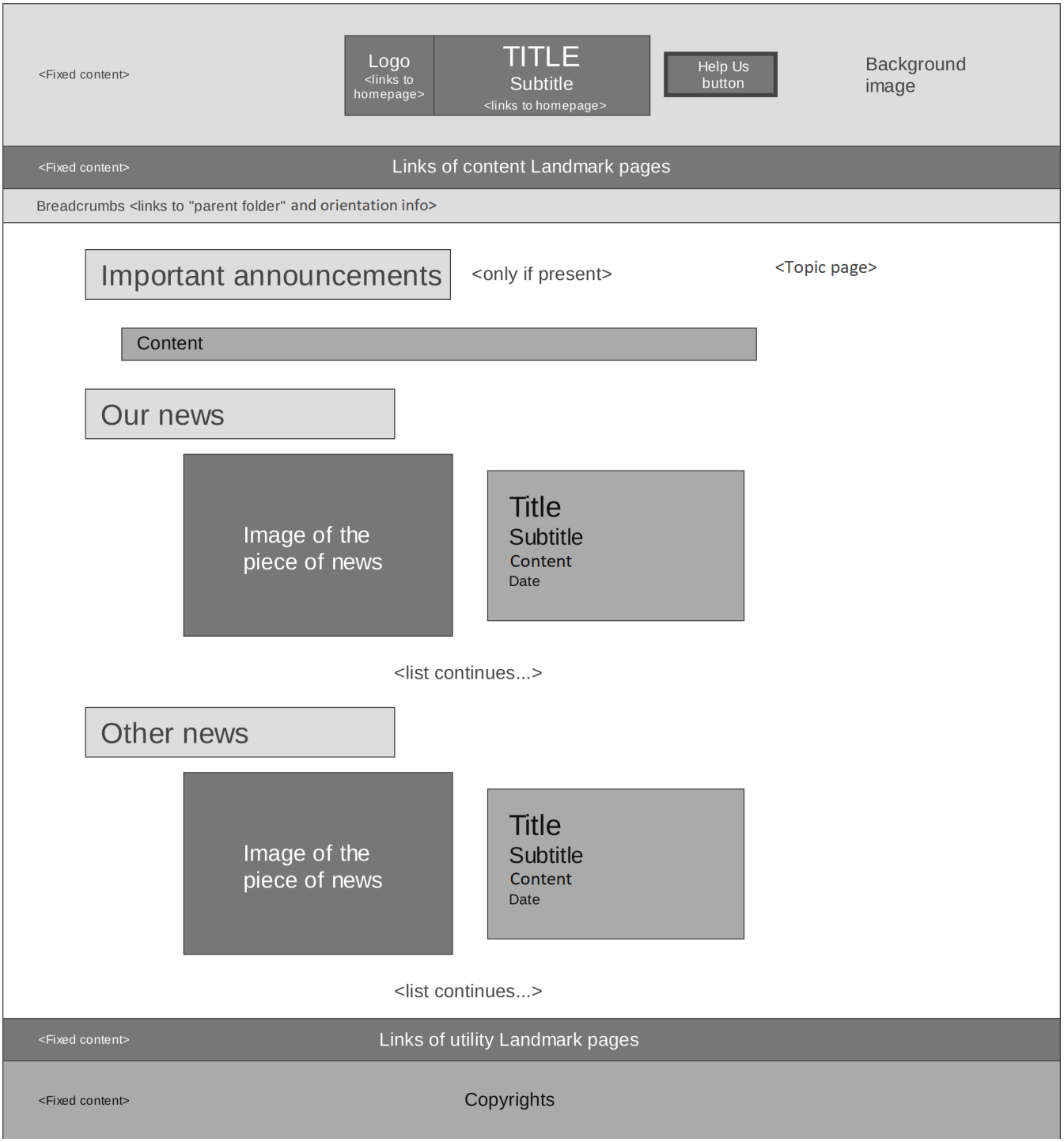

Figure 4.6: Single topic page: News

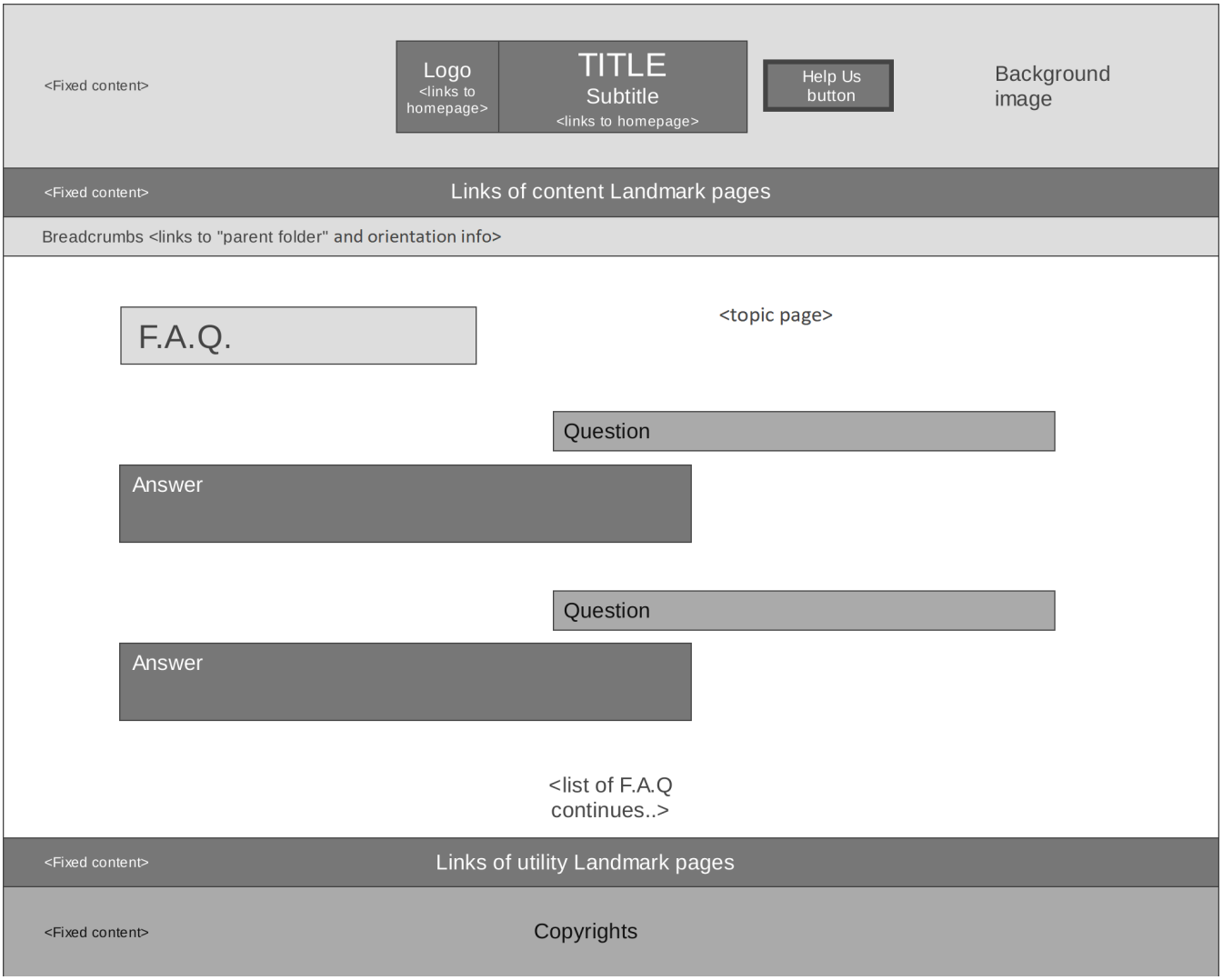

Figure 4.7: Single topic page: F.A.Q.

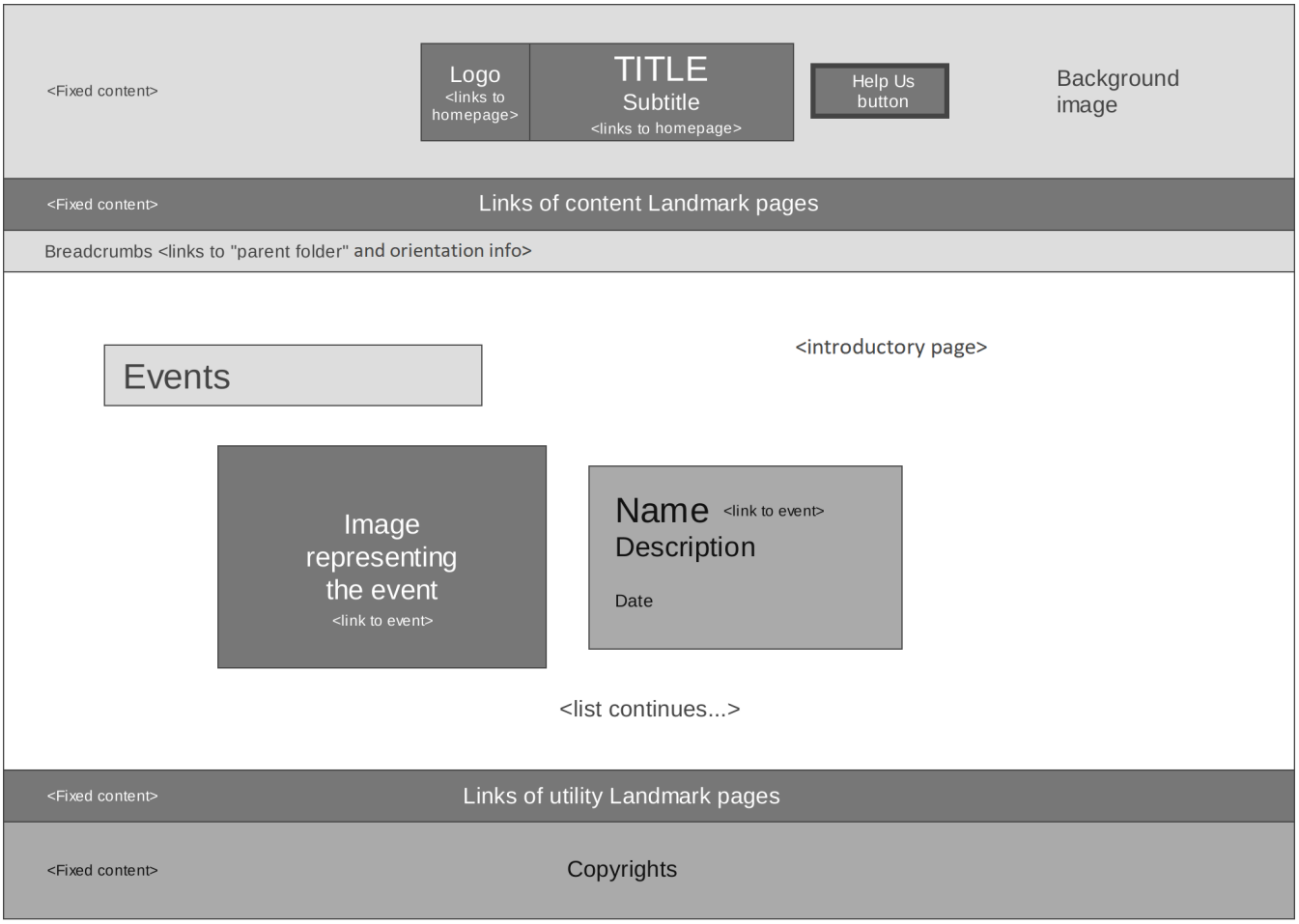

Figure 4.8: Events Group page

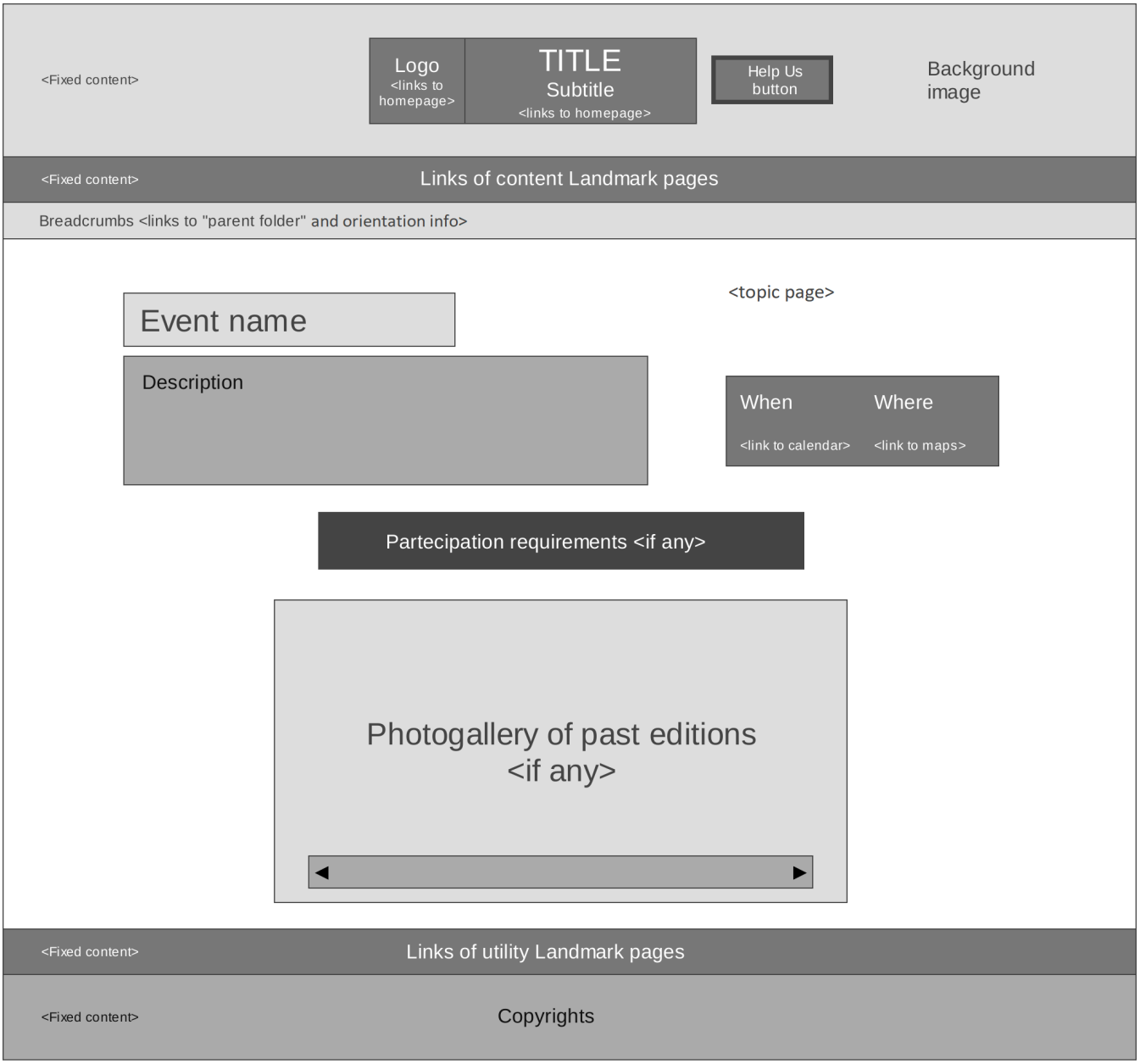

Figure 4.9: Event Multiple Topic Page

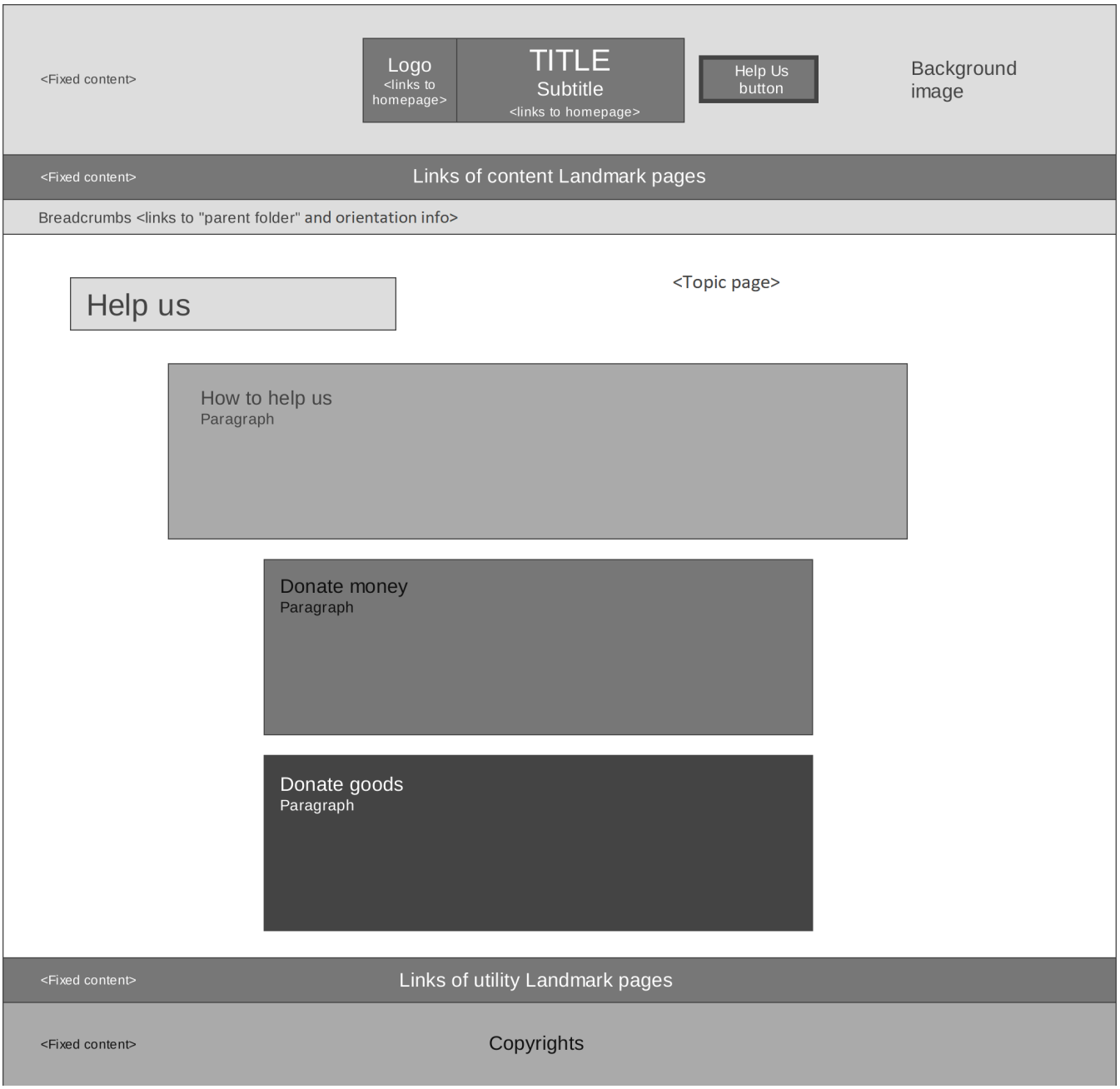

Figure 4.10: Single Topic Page: Help us

Chapter 5

DB Design

5.A Entity Relationship

The ER diagram shows how information is organized in the database at an abstract level.

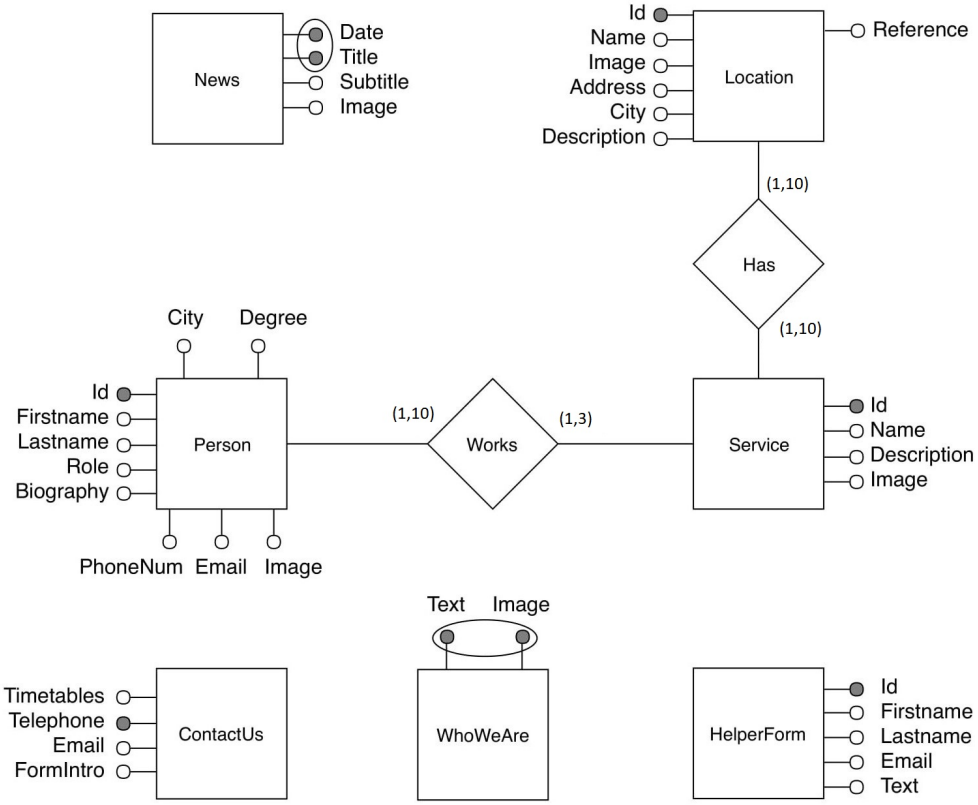

Figure 5.1: Entity Relationship Diagram

5.B Relational Tables

The relational tables represent how the DB is organized in a more concrete way, more similar to the final data structure used in the real database.

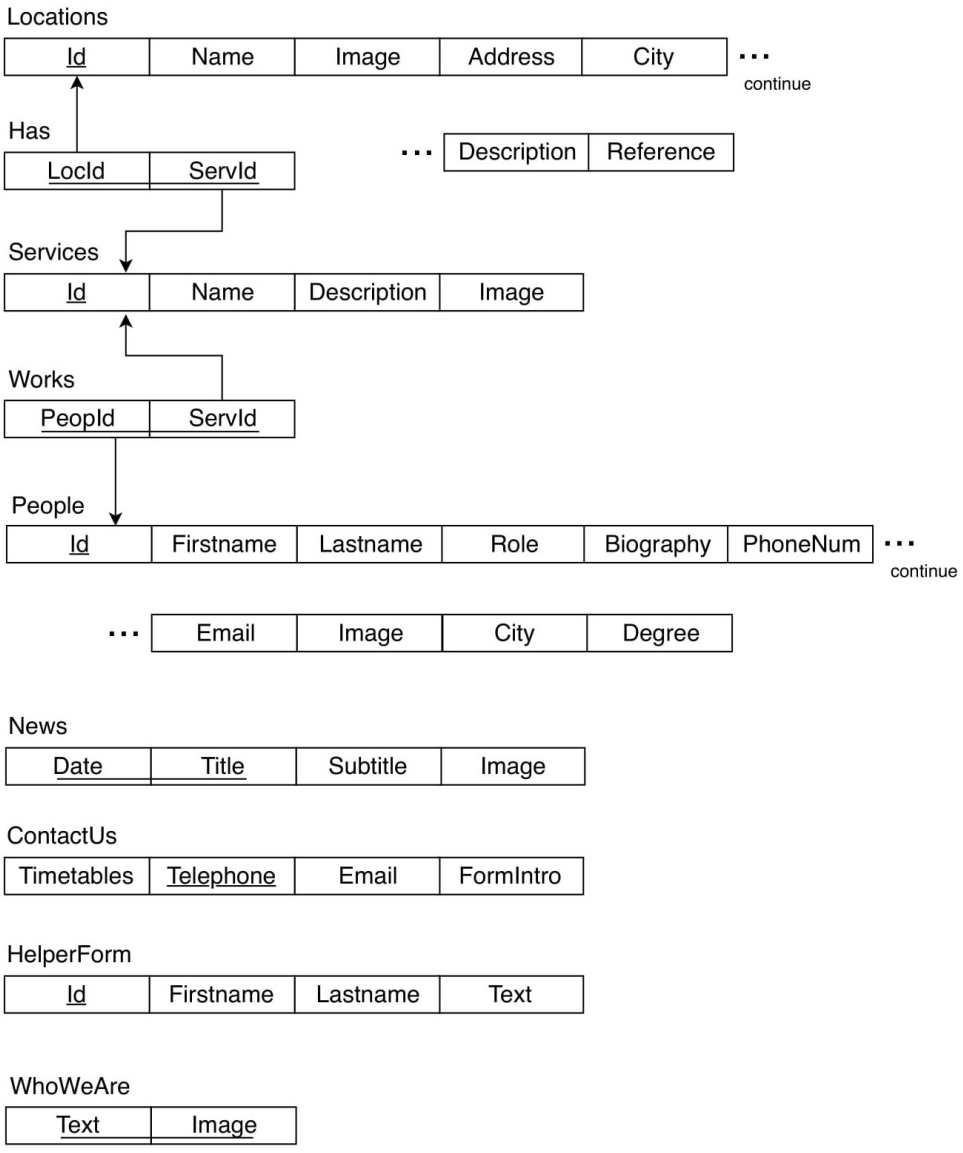

Figure 5.2: Relational Tables Diagram