

Claims:

1. System for the generation of call advance data for an elevator control which system is suitable for installation in an elevator car moving in an elevator shaft (12) and comprises at least one acceleration sensor (32) outputting current acceleration data and/or magnetometer (32) outputting a magnetic flux signal which comprises current magnetic flux data at the current position of the elevator car, which acceleration sensor and/or magnetometer is mounted in connection with the elevator car (14),
a velocity calculating unit which calculates from the current acceleration/magnetic flux data or from current car position data current car velocity data,
a position calculating unit which calculates from the current acceleration/magnetic flux data and/or from the current car velocity data current car position data;
and a call advance processing unit (42) which calculates from the current car velocity data and the current car position data call advance data which designates the time until which the car is able to stop at the next approaching floor in travelling direction, which call advance data is transmitted to a call allocation unit (25) of an elevator control (24).
2. System according to claim 1, wherein the acceleration sensor and/or magnetometer (32), the velocity calculating unit, the position calculating unit and the call advance processing unit are located in a sensor unit (26) mounted to the elevator car (14).
3. System according to claim 1 or 2, comprising a first wireless data transmission link (28), and co-acting with a second wireless transmission link (30), connected with the elevator control (24).
4. System according to claim 3, wherein the first wireless data transmission link (28) is located at the outside of the elevator car (14).

5. System according to claim 3 or 4, wherein the second wireless transmission link (30) is located in the elevator shaft (12).
6. System according to one of the preceding claims, comprising a memory (36) for at least one acceleration profile establishing the acceleration vs. time for different routes of the elevator car (14) in the shaft (12).
7. System according to claim 6, wherein the call advance processing unit (42) compares the current acceleration data with the acceleration profile to verify or to improve accuracy of the current car position data or car velocity data.
8. System according to claim 6 or 7, according to which different acceleration profiles are stored in the memory (36) for different car load conditions.
9. System according to claim 8, comprising a car load calculating unit, which derives the current car load by comparing the current acceleration data with the acceleration profile of the corresponding car load condition.
10. System according to one of claims 6 to 9, wherein the acceleration profiles are updated in certain intervals.
11. System according to claim 10, wherein the acceleration profile is updated if the current acceleration data deviates from the acceleration profile by at least a certain threshold value.
12. System according to one of claims 6 to 11, wherein acceleration profiles are repeatedly stored in the memory (36) and a maintenance calculation unit is arranged in the system comprising a comparator to compare the acceleration profiles over time, whereby a maintenance signal is derived if the difference between corresponding values of a past acceleration profile and a current acceleration profile exceed a certain threshold value.
13. System according to one of claims 6 to 12, wherein the acceleration profile comprises the acceleration values of an elevator ride from each floor to each other floor of the building.

14. Elevator system (10) having at least one elevator with at least one elevator car (14) driving in at least one elevator shaft (12) driven by a drive unit (22), which elevator system (10) has a system for the generation of call advance data for an elevator control (24) according to one of the preceding claims.