Use of SSCC with a logistics network

Company background: The whole company is a co-operative formed by about 30 regional carriers. The group can provide shipment services all over the country using a two-stage shipment transport system. Most shipments are handled by a daily direct shipment flow between individual partners, channelled through about 350 direct lines. The remaining shipments, which cannot be handled directly, are processed via the hub-and-spoke system. Using the two-stage system with a central hub in the geographical traffic centre of the country, the company can offer transit times of 24 or 48 hours and additional logistics value added services.

The company`s entire logistics chain management is based on the GS1 System. The logistics network is linked to an information system, based on the interface scanning of the Serial Shipping Container Code (SSCC), as well as remote data transmission.

Ship-to-Delivery Process

The **SSCC is the basis for** unmistakable **identification** and communication in the company`s network.

- Larger customers generally identify their own shipments with the SSCC.
- Shipments from smaller customers, without electronic data processing (EDP) handling, are labelled at the carrier's shipping station during the unloading process.
- In the network, each individual transport unit is labelled with the EAN 128 logistics label.
- If several transport units are shipped together as one shipment, the SSCCs are linked in the database with the number of the first package.

  Advantage: Compared with shipment-based labelling, package-based processing provides more detailed status information.If packages are damaged, their value can be determined more precisely.

- The labelled packages are then "linked" to the respective shipment order through the order management system.
- Each package label also bears two smaller labels containing the same SSCC as the main label. They are placed on the original and on a copy of the shipment order.
- The order is then registered and prepared for hub or direct routes when the SSCC will be scanned at every interface in the flow process.

The **package routing** is a paperless process based on the data generated by scanning the SSCC bar code at each interface along the supply chain.

- Each scanning point registers a status message. If a shipping error occurs or a package is damaged, the system sends a warning. Otherwise, the data from the scanning is only recorded.
- Upon delivery of the goods, the data and product flows are matched.

During **deliveries**, drivers scan each package's SSCC or receipt.

- In the event of a **problem**, they manually enter an error status message for the package and the recipient's name via the mobile device's keyboard. This data is read when drivers return to the shipping station or is transmitted on-line via wireless mobile services. As a result, information about the package's status is readily available throughout the system, without any communication break between electronic database filing and paper receipt.

Advantages of using the SSCC:

With an International open system

The company network allows partners to ship items outside the system network. Thanks to the GS1 System, partners do not have to invest twice in technology or duplicate tasks. Based on the SSCC, the scanner software recognises their shipments, and switches to package level for identification. This means that partners can continue using partially heterogeneous hardware and software platforms.

Optimised handling

The **hub-and-spoke system** requires the precise planning of main flows and very rapid transit. Several thousand shipments each night and often several thousand tons of transit volume can no longer be manually routed. The EAN-128 standard is the solution, acting as a ”router” for each package in the hub.

Clear documentation

All partners of the group, including the hub, are independent enterprises. Thus, clear documentation of interface data is very significant, particularly relating to legal liabilities, if shipments are damaged.

Enhanced customer service

The EAN logistics label allows shipments to be easily tracked. All participants in the logistics chain (customers, carriers and recipients) benefit from the continuous shipment updates, which are often not directly visible to customers and can quickly react to delays and damaged shipments, as well as flexibly adjust their plans according to the just-intime principle.