

Chapter 5

Conformed Dimensions

When dimension tables exhibit the compatibility necessary to support drilling across, they are *conformed dimensions*

Read pages 85-99

Pp 85-93: problems w/o conformance

Pp 93-99: types of conformance

Conformed Dimension Types

Shared Dimension Tables

two stars share the same *logical* dimension table
may be the same physical table,
or,
just identical tables that share the same structure and
content.

See figures 4-8, 5-1

Conformed Dimension Types

Conformed Rollups

The dimension attributes of one table are a subset of the dimension attributes of the other. The common dimension attributes share the same structure and content.

Figure 5-3 -4 -5:

month and territory are conformed rollups of day and salesrep respectively.

Conformed Dimension Types

Conformed Rollups

Day

| |
|--------------------|
| day_key |
| full_date |
| day_name |
| day_number |
| day_number_in_year |
| month_name |
| month_number |
| month_abbreviation |
| fiscal_period |
| year |

Month

| |
|--------------------|
| month_key |
| month_name |
| month_number |
| month_abbreviation |
| fiscal_period |
| year |

Smaller table is the *conformed rollup*;

The larger is the *base dimension*

The base dimension could/should be the source for the conformed rollup.

Conformed Dimension Types

Conformed Rollups

Day

| |
|--------------------|
| day_key |
| full_date |
| day_name |
| day_number |
| day_number_in_year |
| month_name |
| month_number |
| month_abbreviation |
| fiscal_period |
| year |

Month

| |
|--------------------|
| month_key |
| month_name |
| month_number |
| month_abbreviation |
| fiscal_period |
| year |

Smaller table is the
conformed rollup;

Assignment 2 includes: create the Month dimension using Day as the source

Conformed Dimension Types

Degenerate dimensions

Recall that these attributes are stored in the fact table.

This technique is commonly reserved for transaction identifiers or document identifiers.

Figure 4-8: `order_id` and `order_line_num`

Conformed Dimension Types

Overlapping Dimensions

non-identical dimension tables may conform through a set of overlapping Attributes .. See next 4 slides

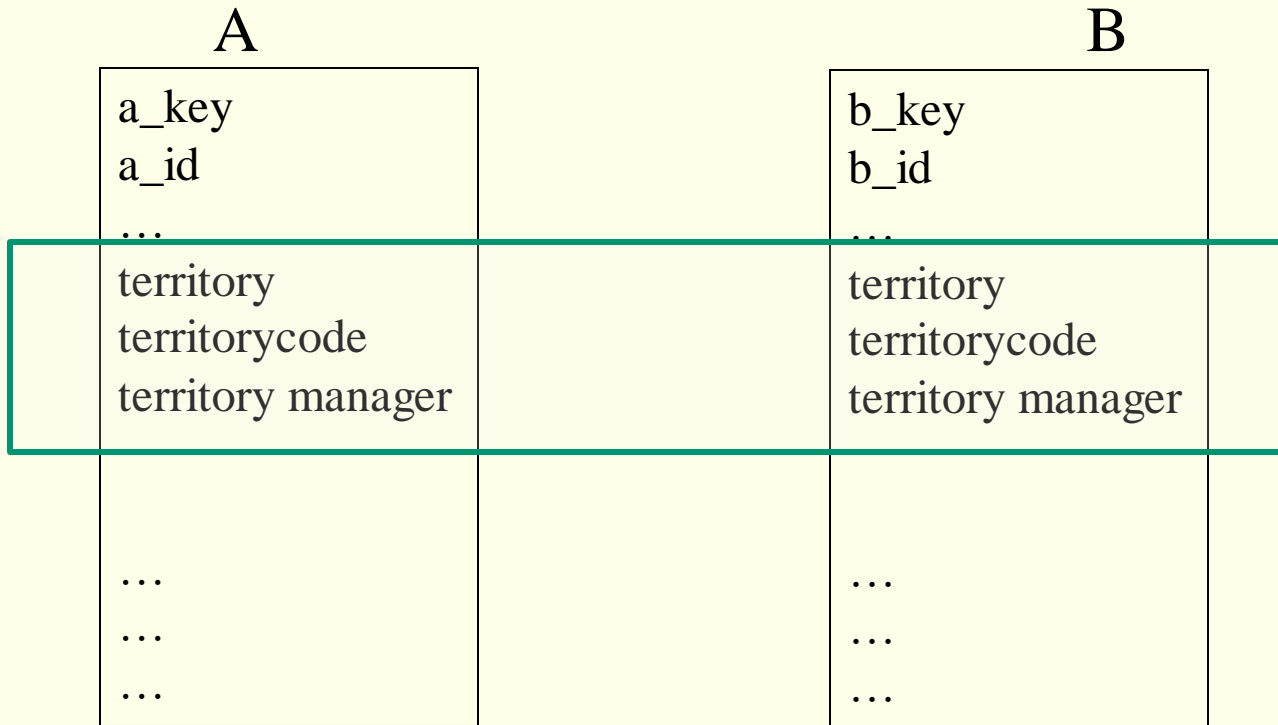
Figure 5-6: two dimensions (customers and salespeople) overlap wrt geography.

Three alternatives for handling the overlap in dimensions - all involve a third table:

- third table for tracking relationships -ch 12 *factless fact tables*
- third table as an outrigger -snowflaking
- See tip at bottom of p 99

Conformed Dimension Types

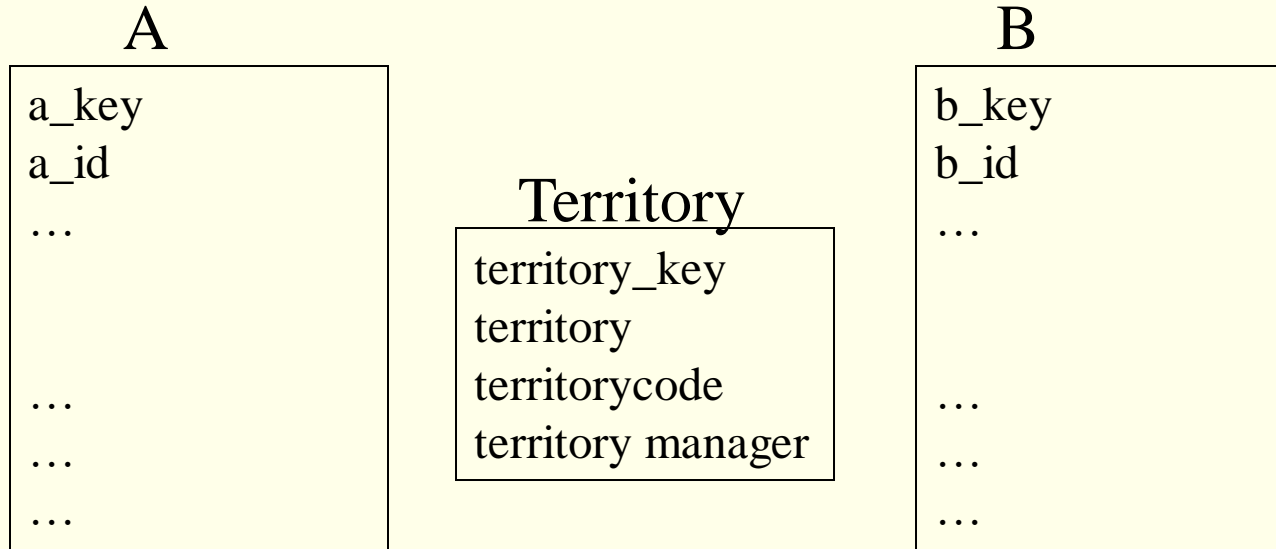
Overlapping Dimensions



There may be issues keeping these common attributes consistent

Conformed Dimension Types

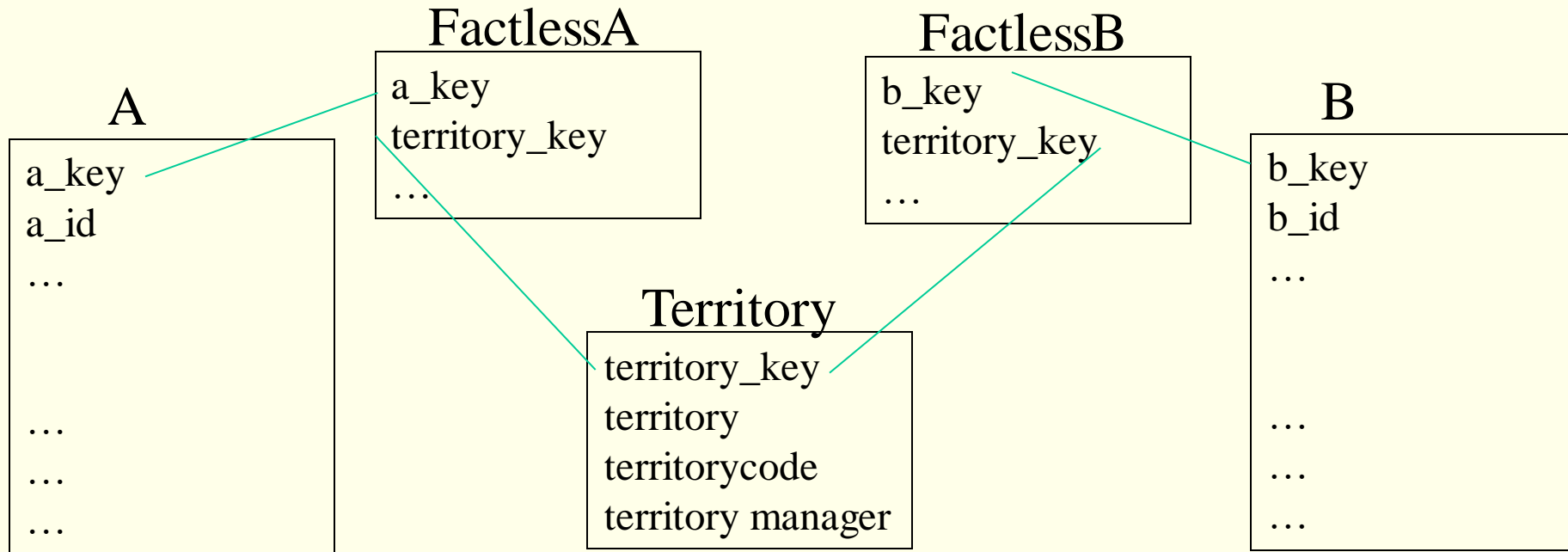
Overlapping Dimensions – separate out into another table/dimension



A **third** table could hold the common attributes

Conformed Dimension Types

Overlapping Dimensions – additional fact tables

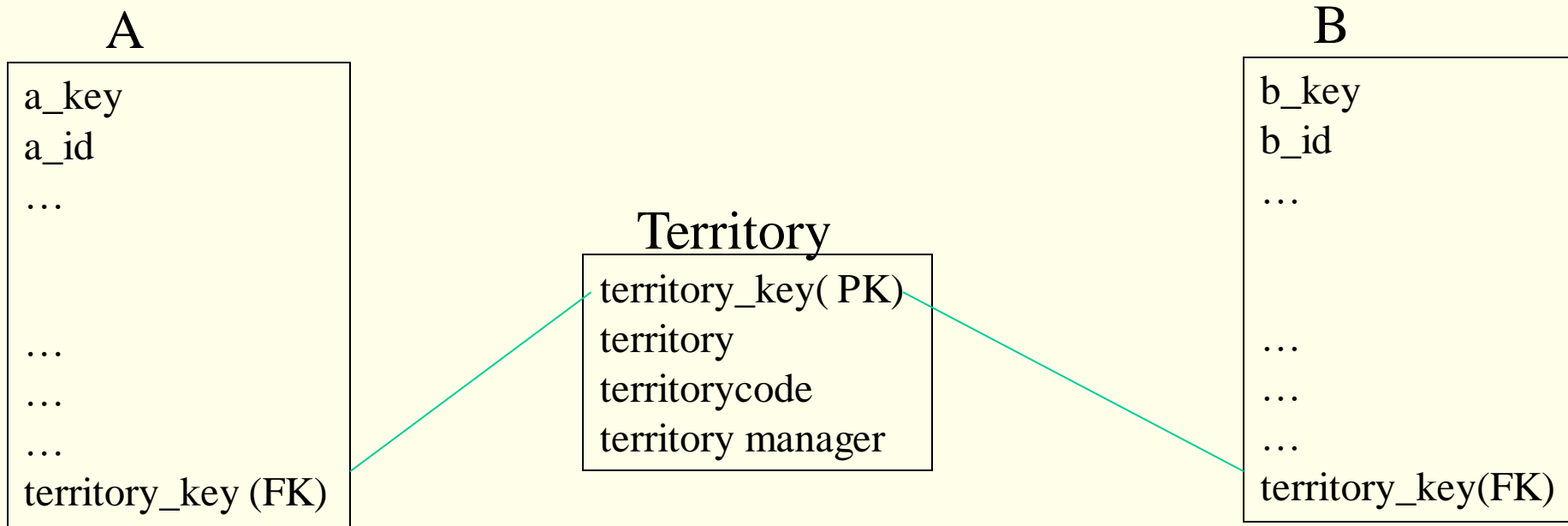


Factless fact tables could be used to maintain relationships between A and Territory, and B and Territory

FactlessA/B would have a least another FK to the Date/Month/... dimension

Conformed Dimension Types

Overlapping Dimensions – use an outrigger (normalization)



Territory is an outrigger to A and to B
Each of A and B contain a FK referencing Territory