DATA MODELS FOR WEBSITE ANALYTICS

Diagram 1) shows an Entity-Relationship Diagram (ERD) for a Logical view and Diagram 2) shows an ERD for a Physical View.

1) ERD Data Model for Website Analytics
This shows a logical view
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Clients
PK client_short_name
    client_full_name
    eg Argos

Visits
PK visit_id
FK registered_user_id
    visit_start_date_time
    other_details

Registered_Users
PK registered_user_id
    registration_date

Argos
PK argos_id
FK registered_user_id

Pages
PK page_url
FK client_short_name
    page_name

Page_Visits
PK record_id
FK page_url
FK status_code
FK visit_id
    visit_datetime
    other_details

Debenhams
PK debenhams_login_email_address
FK registered_user_id

Status_Codes
PK status_code
    status_description
    eg 404= This page cannot not found

HSBC_Users
PK HSBC_user_ID
FK registered_user_id

Clients
PK client_short_name
    client_full_name
    eg Argos

2) Data Model for Server Log
This shows a physical view
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Pages
PK page_url
FK client_short_name
    page_name

Server_Log
PK log_entry_id
FK page_url
FK registered_user_id
FK status_code
    bytes_serverd
    client_IP_address
    HTTP_code
    referer
    request_datetime
    other_details

Registered_Users
PK registered_user_id
    registration_date

Status_Codes
PK status_code
    status_description
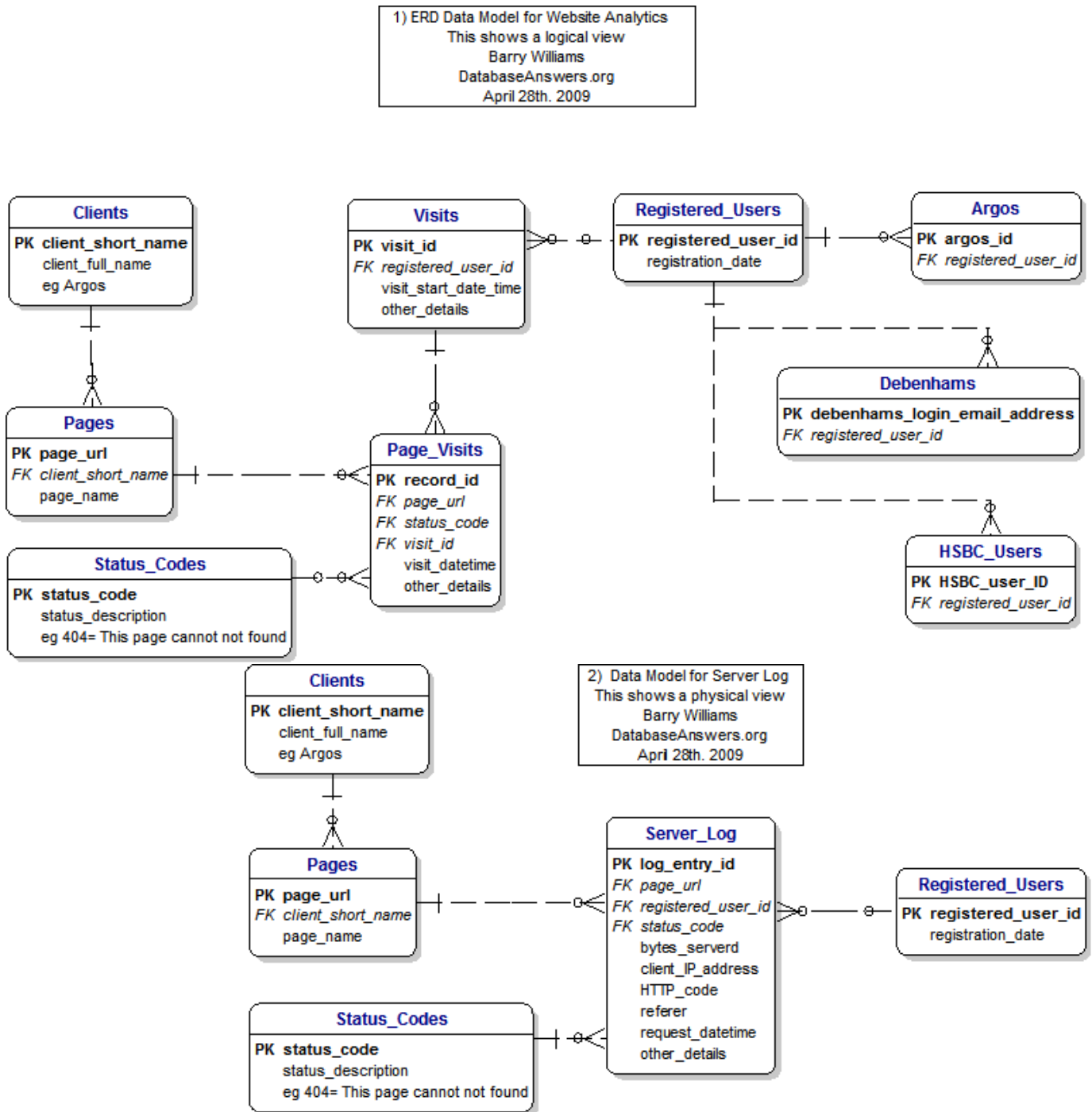   eg 404= This page cannot not found

Diagram 3) shows a Data Mart to support BI and Performance Reports.

3) Data Mart for Website Analytics
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Time_Periods
PK period_id
  period_date
  day_date
  day_number
  week_number
  month_number
  year_number

Clients
PK client_short_name
  client_full_name
  eg Argos, Debenhams
  eg HSBC, Sky, Sony Europe

Pages
PK page_url
  page_details

Status_Codes
PK status_code
  status_description
  eg 404= This page cannot not found

Visit_Facts
PK fact_id
FK argos_id
FK client_short_name
FK debenhams_login_email_address
FK HSBC_user_ID
FK page_url
FK period_id
FK status_code
FK visit_id
  averages
  counts
  total_amounts
  values_to_date
  other_details

Argos
PK argos_id
  registered_user_id

Debenhams
PK debenhams_login_email_address
  registered_user_id

HSBC_Users
PK HSBC_user_ID
  registered_user_id

Visits
PK visit_id
  visit_start_date_time
  other_details