

## NIELSEN'S RETAIL MEASUREMENT SERVICE PATENT PORTFOLIO

To date, Nielsen's Retail Measurement Service (RMS) portfolio includes over 30 patents and pending applications worldwide. Our patents cover various subject matter including a measure of sales based on purchases from retailers' electronic point of sales systems, crowdsourcing purchases or receipts, dedicated purchase panels and direct store audits.

Examples of patent titles included in the Nielsen Retail Measurement Service portfolio include:

SYSTEMS AND METHODS FOR CONSUMER PRICE INDEX DETERMINATION  
USING PANEL-BASED AND POINT-OF-SALE MARKET RESEARCH DATA

METHODS, APPARATUS, AND ARTICLES OF MANUFACTURE TO MEASURE  
GEOGRAPHICAL FEATURES USING AN IMAGE OF A GEOGRAPHICAL LOCATION

METHODS AND APPARATUS TO ESTIMATE MARKET OPPORTUNITIES FOR AN  
OBJECT CLASS

PRODUCT AUDITING IN POINT-OF-SALE IMAGES

METHODS, SYSTEMS AND APPARATUS TO IMPROVE THE EFFICIENCY OF  
CALCULATING A CUSTOMER RETENTION RATE

METHODS, SYSTEMS AND APPARATUS FOR CALIBRATING DATA USING RELAXED  
BENCHMARK CONSTRAINTS

METHODS, SYSTEMS AND APPARATUS TO IMPROVE BAYESIAN POSTERIOR  
GENERATION EFFICIENCY

METHODS AND APPARATUS TO EXTRACT TEXT FROM IMAGED DOCUMENTS

METHODS, SYSTEMS, APPARATUS, AND ARTICLES OF MANUFACTURE TO  
GENERATE CORRECTED PROJECTION DATA FOR STORES

METHODS, SYSTEMS, APPARATUS AND ARTICLES OF MANUFACTURE TO MODEL  
eCOMMERCE SALES

METHODS, SYSTEMS, ARTICLES OF MANUFACTURE, AND APPARATUS TO  
ENHANCE MARKET RESEARCH DATA COLLECTION QUALITY

A SYSTEM FOR ADAPTIVE SAMPLE ESTIMATION AND DYNAMIC  
DATACOLLECTION

A PERSONALIZED SYSTEM FOR DATA COLLECTION EXECUTION

METHODS AND APPARATUS TO DETERMINE EFFECTS OF PROMOTIONAL  
ACTIVITY ON SALES

SYSTEMS AND APPARATUS TO DETERMINE SHOPPER TRAFFIC IN RETAIL  
ENVIRONMENTS

METHODS AND APPARTUS TO DETERMINE THE DIMENSIONS OF A REGION OF  
INTEREST OF A TARGET OBJECT FROM AN IMAGE USING TARGET OBJECT



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Date